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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA - WESTERN DIVISION

HONORABLE STANLEY BLUMENFELD, JR., U.S. DISTRICT JUDGE

SANTA CLARITA VALLEY WATER AGENCY, )  
 )  
 Plaintiff, )  
 )  
 v. ) Case No.  
 ) CV 18-6825 SB (RAOx)  
 WHITTAKER CORPORATION, et al., )  
 ) Volume 15  
 Defendants. ) (Pages 1674 - 1753)  
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REPORTER'S TRANSCRIPT OF TRIAL PROCEEDINGS  
 TRIAL DAY 8: P.M. SESSION  
 TUESDAY, NOVEMBER 30, 2021  
 1:02 P.M.  
 LOS ANGELES, CALIFORNIA

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19  
20  
21  
22  
23  
24  
25

**INDEX OF WITNESSES**

<u>DEFENDANT'S WITNESSES</u>	<u>PAGE</u>
HOKKANEN, Gary	
Cross-Examination (Resumed) by Mr. Richard	1678
Redirect Examination by Mr. Blum	1713
Recross-Examination by Mr. Richard	1720
Further Redirect Examination by Mr. Blum	1727
Further Recross-Examination by Mr. Richard	1727
SIMPSON, Timothy	
Direct Examination by Mr. Gallagher	1729

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

**INDEX OF EXHIBITS**

		FOR EVIDENCE PG.
<u>NUMBER</u>	<u>DESCRIPTION</u>	
34 -	10/2015 Saugus formation, Volatile Organic Compound Investigation Report	1694

1 TUESDAY, NOVEMBER 30, 2021; 1:02 P.M.

2 LOS ANGELES, CALIFORNIA

3 -oOo-

4 (In the presence of the jury:)

01:02PM

5 THE COURT: We remain on the record in the trial  
6 matter with all present who were present before the break,  
7 including the jury, all counsel, and the witness.

8 Mr. Hokkanen, you understand you remain under oath?

9 THE WITNESS: Yes, sir.

01:03PM

10 THE COURT: You may continue with your  
11 cross-examination.

12 MR. RICHARD: Thank you, Your Honor.

13 GARY HOKKANEN,

14 DEFENDANT'S WITNESS, PREVIOUSLY SWORN, TESTIFIED AS FOLLOWS:

01:03PM

15 **CROSS-EXAMINATION (RESUMED)**

16 BY MR. RICHARD:

17 Q. We were talking about the history of the Whittaker  
18 site. Is it fair to say that you, in your work in this case,  
19 did not see any records from Whittaker such as daily logs or  
20 operational records that would tell you when TCE was used as a  
21 solvent -- used as a solvent?

01:03PM

22 A. That's correct. I didn't really focus on the  
23 history like that.

24 Q. Do you know whether Whittaker provided those records  
25 to any of the experts in this case?

01:04PM

1 A. I don't know.

2 Q. You've seen those types of records in other cases  
3 you've been involved in; correct?

4 A. At some other sites, I have seen records like that.

01:04PM

5 Q. And so the same for PCE, you can't tell the jury  
6 when or how much PCE was used at the Whittaker site; is that  
7 fair?

8 A. That's correct.

9 MR. BLUM: Irrelevant. 403.

01:04PM

10 THE COURT: Overruled.

11 MR. RICHARD: Thank you.

12 Q. (BY MR. RICHARD:) And would you agree that, in your  
13 line of work, you can use contaminants and groundwater as  
14 tracers over a long period of time for migration pathways?

01:04PM

15 A. It can be, yes.

16 Q. And just turning to the SIC site you mentioned.  
17 You -- you identified -- there's a couple of chemicals that  
18 were used in large quantities, among others. But is it fair to  
19 say you understood that vinyl chloride was a chemical used in  
20 the manufacture of PVC piping at the SIC site?

01:05PM

21 A. Yes.

22 Q. And I think you were asked about DCA. That's  
23 another chemical that was used?

24 A. That's my understanding, yes.

01:05PM

25 Q. And it's -- those chemicals have been detected in

1 the groundwater beneath the SIC site?

2 A. Yes.

3 Q. And you were asked, well, DCA has not been found in  
4 the Saugus 1 and Saugus 2 wells; correct?

01:05PM 5 A. Yes.

6 Q. And then Mr. Blum asked you, well, wouldn't that  
7 suggest that SIC was not the source of contamination in those  
8 wells, and you said not necessarily. Did I hear that right?

9 A. I think I said that, yeah.

01:05PM 10 Q. Okay. And with respect to vinyl chloride, even  
11 though that's been detected in the groundwater beneath the SIC  
12 site, that chemical also has not been detected in the Saugus 1  
13 or Saugus 2 wells; is that correct?

14 A. I think that's correct.

01:06PM 15 Q. So in that case, you would not use those chemicals  
16 as tracers from the SIC site to the Saugus wells. Is that  
17 fair?

18 A. Yes.

01:06PM 19 Q. Okay. And you're not testifying, you're not telling  
20 the jury to reasonable degree of scientific certainty, are you,  
21 that even in the absence of those two tracers which were found  
22 in the groundwater at SIC and not found in Saugus 1 and 2,  
23 you're not telling the jury that SIC is, to a degree of  
24 reasonable scientific certainty or some other standard, a  
01:06PM 25 source of TCE in those wells? Or are you?

1 A. My opinion --

2 Q. I didn't hear the first word.

01:07PM

3 A. My opinion was that -- that there was a plausible  
4 pathway from the SIC site to Saugus 1 and 2. I did not  
5 conclude that it was or was not a source.

6 Q. Okay. And we can agree that the absence of DCA and  
7 vinyl chloride in the Saugus wells is a relevant consideration  
8 in trying to answer that question; is that fair?

01:07PM

9 A. I didn't see that as particularly relevant based on  
10 what I described earlier as the groundwater flow at the SIC  
11 site. What I saw as relevant was the TCE and the chloroform  
12 moving, migrating to the west of the SIC site towards Saugus 1  
13 and 2.

01:07PM

14 Q. The water migrating that did not include the DCA and  
15 vinyl chloride chemicals?

16 A. That's what the -- that's what the water quality in  
17 wells west of the SIC site show. They show both TCE and  
18 chloroform but not DCA or vinyl chloride.

01:08PM

19 Q. Now, they do show DCA, just not as much as other  
20 parts of the SIC site; isn't that correct?

21 A. In the GW-13 and AL-12 wells, I don't believe DCA  
22 shows up, unless you have data that shows otherwise.

23 Q. Okay. Well, we'll -- we'll get there.

01:08PM

24 Now, I want to ask you, we looked at a number of  
25 maps involving plumes. You're -- you've seen maps that have



1 been drawn that show a perchlorate plume having migrated or  
2 reached from the Whittaker site to all of the wells at issue in  
3 this case; correct?

4 A. Yes.

01:08PM

5 Q. And so is it fair to say that even though -- we can  
6 pull up Exhibit 180 -- let's take a look at one of the plumes  
7 you were shown in your direct examination.

01:09PM

8 So this is for one of the HSUs, we -- we see a --  
9 this is an interpretation of a plume. You'd agree that this is  
10 not a precise rendition, it's someone's interpretation based on  
11 some data points?

12 A. Based on the data that they had available.

01:09PM

13 Q. Okay. And this does not show -- this is a plume  
14 that Whittaker's consultant at AECOM -- this does not show  
15 perchlorate at V-201 or V-205; correct?

16 A. No. And it has been detected in those wells.

17 Q. Right.

01:09PM

18 And Whittaker -- are you -- it's your opinion -- or  
19 do you have an opinion that the perchlorate in those wells is  
20 from the Whittaker site?

21 A. I believe it is, yes.

22 Q. And so, in general, you would consider perchlorate  
23 to be a tracer chemical?

24 A. Yes.

01:10PM

25 Q. So if we find perchlorate in the V-201 and V-205 and

1 the other wells at issue, doesn't that suggest to you not just  
2 a plausible pathway but an actual mechanism by which those  
3 contaminants were transported from the groundwater beneath the  
4 Whittaker site to those wells?

01:10PM

5 A. Which contaminants? I'm sorry.

6 Q. Perchlorate.

7 A. Yes. Perchlorate is in 205 and 201, as I testified,  
8 I believe, is from the Bermite site, yes.

01:10PM

9 Q. And so if we find it in the wells and it's -- by the  
10 way, was that true in 1997, that perchlorate found in those  
11 wells -- if it's true today, was it true in 1997?

12 A. No. I think perchlorate was detected in Saugus 1  
13 and 2 in '97. It was detected in these other wells after that.

01:10PM

14 Q. Okay. And -- but at the -- let's take Saugus 1 and  
15 Saugus 2. In 1997, it was detected. Do we now know that was  
16 from the Whittaker-Bermite site? Is that fair?

17 A. I believe that's correct.

01:11PM

18 Q. Did you review any documents that showed that  
19 Whittaker denied for many years that it was -- that the  
20 perchlorate emanated from its site?

21 A. I did not review documents like that, no.

22 THE COURT: May I ask, before you continue. You  
23 said that perchlorate did, in fact, migrate to all four wells,  
24 Saugus 1, Saugus 2, V-201, and V-205. Is that correct?

01:11PM

25 THE WITNESS: Yes.

1 THE COURT: And did you -- do you have an opinion as  
2 to when it reached which well first? Do you have a timing  
3 opinion?

01:11PM 4 THE WITNESS: It -- it has been detected -- you're  
5 testing my memory now, Your Honor. It was detected after -- it  
6 was detected in Saugus 1 and 2.

7 THE COURT: All right. What I'm asking for is an  
8 actual ordering. So I heard you say it showed up first in S-1  
9 and S-2, or Saugus 1 and Saugus 2.

01:11PM 10 THE WITNESS: Yes.

11 THE COURT: Are you able to order it so you can say,  
12 in my opinion, it was Saugus 1 first, Saugus 2 second,  
13 et cetera?

01:12PM 14 THE WITNESS: Well, Saugus 1 and 2 were first  
15 sampled at the same time. And so perchlorate was detected at  
16 the same time in those two wells. It was detected later on in  
17 201 and 205.

18 THE COURT: 201 first or the same thing, 201 and 205  
19 at the same time?

01:12PM 20 THE WITNESS: It was within a few years of each  
21 other. It was detected in those two wells. It was in -- I  
22 think it was in, like, 2010 to '15 range. I'd have -- I can't  
23 remember exact dates, I'm sorry.

24 THE COURT: Certainly.

01:12PM 25 And if you don't remember, that's fine. But as

1 between 201 and 205, do you recall which one it showed up in  
2 first?

3 THE WITNESS: I think it was detected in 201 first  
4 and then literally three or four years later in 205.

01:12PM 5 THE COURT: Thank you.

6 Mr. Richard.

7 MR. RICHARD: Thank you, Your Honor.

8 Q. (BY MR. RICHARD:) So you -- you did -- you were  
9 shown, again very quickly, but you looked at some documents to  
01:13PM 10 Whittaker from DTSC. Did I understand that correctly in your  
11 direct testimony?

12 A. I don't recall that. Which documents are you  
13 referring to?

14 Q. Oh. You were shown document after document after  
01:13PM 15 document.

16 A. Oh. Well, they do go to DTSC. That's correct.  
17 Like the AECOM monitoring reports go to DTSC.

18 Q. Right. But you recall being shown before lunch  
19 documents from DTSC to Whittaker and its consultants regarding  
01:13PM 20 the status of their SVE and cleanup efforts in 2019 and 2020  
21 and 2021?

22 A. Have I seen those? I don't believe I've seen those,  
23 no.

24 Q. Oh. Okay. I guess we can pull them up.

01:13PM 25 A. Was that during the testimony?

1 Q. Yeah. We looked at some documents here today.

2 THE COURT: Why don't you perhaps show the  
3 documents, if you would like to, Mr. Richard.

4 MR. RICHARD: Yeah. I'll have to get the exhibit  
01:13PM 5 number, Your Honor. So -- it was a flurry, so I'll grab those,  
6 Your Honor.

7 Q. (BY MR. RICHARD:) The -- when you were talking  
8 about chloroform, there have been detections of chloroform at  
9 the Whittaker site in the groundwater; correct?

01:14PM 10 A. Yes. We looked at a figure that showed that on the  
11 eastern side of the site, there have been some detections,  
12 correct.

13 MR. RICHARD: And could we pull up the Whittaker  
14 chloroform demonstrative? And I apologize, we got this as part  
01:14PM 15 of this -- this morning. So I don't think we have an exhibit  
16 number, Your Honor. It's Figure 1.

17 Q. (BY MR. RICHARD:) Did you prepare this?

18 A. Um, I don't remember preparing this particular  
19 figure, no.

01:14PM 20 Q. Who's E.K.I.?

21 A. That's the firm that I work with.

22 Q. Do you know why this says "Draft" on it?

23 A. No, I don't.

24 Q. And you said, well, there's some chloroform at the  
01:14PM 25 eastern part. Did I hear that correctly?

1 A. Yes. The green dots, I believe.

2 Q. Okay. Well, don't we see green dots on the western  
3 part of -- of the site as well?

01:15PM

4 A. Well, we see a lot of white dots right in this area  
5 (indicating).

6 Q. Right.

7 A. There's -- I guess this would be in the central part  
8 of the site. I call these more on the eastern side of the  
9 site.

01:15PM

10 Q. And what's that red dot right here (indicating)?

11 A. That is a detection between 5 -- 50 and 500 parts  
12 per billion.

13 Q. And do you know what operations occurred where that  
14 red dot appears?

01:15PM

15 A. No idea.

16 Q. Have you heard of something called the Hula Bowl at  
17 the Whittaker site?

18 A. I've heard of the Hula Bowl. I don't really know  
19 the history of that area.

01:15PM

20 Q. Any idea where the Hula Bowl is located?

21 A. The Hula Bowl, I believe, is located somewhere right  
22 in this area (indicating), if I'm not mistaken. But --

23 Q. Okay. And so, again, we'll just mark this up and --  
24 those -- what was the cause of those detections that we see  
01:16PM 25 right at the edge of the Whittaker site that I just circled?

1 There's, I don't know, four or five green dots of chloroform  
2 detections. Do you know what the source of that chloroform  
3 was?

4 A. No, I don't.

01:16PM 5 Q. Okay. Any reason to doubt those detections at the  
6 western edge of the site?

7 A. No. The data is likely accurate.

8 Q. And what's the groundwater flow direction in that  
9 area?

01:16PM 10 A. Groundwater flow tends to be to the west, southwest.

11 Q. Okay. Thank you.

12 MR. RICHARD: You can remove all the scribbles.

13 Q. (BY MR. RICHARD:) And did you find the --

14 MR. RICHARD: Oh, okay. My bad.

01:17PM 15 Q. (BY MR. RICHARD:) I wanted to show you one of the  
16 figures attached to your report. I think it's Figure 42. I  
17 have -- I think it's been admitted as Exhibit 194. If we could  
18 look at that.

01:17PM 19 And this is a -- so we looked at a figure from 2019  
20 that did not show the perchlorate plume extending to V-201 and  
21 V-205. And here's a plume -- can you tell us what the yellow  
22 plume is that we're looking at here, the yellow oblong figure?

23 A. This is a representation, as it says in the legend,  
24 "Approximate extent of perchlorate detected above RL and  
01:17PM 25 Saugus." So reporting limit is RL.

1 Q. And this was attached to your expert report;  
2 correct?

3 A. Yes. This is from the 2015 CH2M Hill report.

4 Q. Right.

01:18PM 5 And that's a report that you reviewed and cite  
6 throughout your own report; correct?

7 A. Correct.

8 Q. And did you take issue with any of the information  
9 on -- on this Figure 42 that you attached to your report?

01:18PM 10 A. The only thing that I had dealt with is the -- this  
11 line here with question marks that the -- Your Honor asked me  
12 about earlier.

13 This is basically the plumes that we've seen and  
14 went over essentially in this area here (indicating).

01:18PM 15 Q. So I'm not sure I'm understanding your testimony.  
16 You don't agree with that interpretation, or you do agree with  
17 that interpretation?

18 A. With the dashed lines connected to the Bermite site?  
19 No.

01:18PM 20 Q. Okay. How about --

21 MR. RICHARD: If we can enlarge -- maybe we can  
22 remove those.

23 Q. (BY MR. RICHARD:) Do you see --

24 MR. RICHARD: If we can enlarge the two question  
01:19PM 25 marks here, that area.



1 Q. (BY MR. RICHARD:) Do you see the -- by the way, the  
2 blue dashes, that was someone's interpretation of a potential  
3 plume for TCE -- is that correct? -- or VOCs?

4 A. The "someone" would be CH2M Hill, yes.

01:19PM 5 Q. Okay. And you understood that there were question  
6 marks because that geologist or hydrogeologist was noting the  
7 absence of offsite monitoring wells with data in that area?

8 A. I -- I don't -- I didn't talk to whoever prepared  
9 this, so I'm not certain why they drew that line and the  
01:19PM 10 question mark there.

11 Q. Isn't it true that there was at the time a lack of  
12 offsite monitoring data in that area, the northern --

13 A. "In that area," you're referring specifically to  
14 where?

01:20PM 15 Q. Just north between those two question marks that we  
16 see in Figure 42 that was attached to your --

17 A. Well, there's a well that's right here (indicating).  
18 Um, that well has -- there's three wells there. They've never  
19 detected TCE.

01:20PM 20 Q. And did CH2M Hill address that in their report?

21 A. In which report? The 2015 report?

22 Q. Yes, sir.

23 A. I don't remember specifically if they talked about  
24 the CW wells. They may have.

01:20PM 25 Q. And again, with respect to a perchlorate plume, you

1 don't disagree, as you sit here, that there's -- whether it's  
2 these precise contours, but there's some plume of perchlorate  
3 from the Whittaker site to all four wells at issue in this  
4 case?

01:21PM

5 A. Is there perchlorate from the Bermite site to the  
6 four production wells? Yes. I think you've asked that before,  
7 and the answer is still yes.

01:21PM

8 Q. Okay. Even though the plume may not be drawn  
9 exactly to your -- in the way you would have prepared it; is  
10 that fair?

11 A. The perchlorate plume or the TCE plume?

12 Q. The perchlorate plume.

13 A. I didn't really have a problem with the perchlorate  
14 plume. It was the TCE plume that I was referring to.

01:21PM

15 Q. Okay. And what was your problem with that?

16 A. Well, they drew a -- they draw -- you can see it  
17 here, they draw a dashed line with question marks. And they're  
18 connecting the TCE plume all the way back.

01:21PM

19 And as we saw before, there's TCE here (indicating)  
20 and TCE way up here (indicating) and monitoring wells in  
21 between. For example, these wells (indicating), this well  
22 (indicating), and then there's a monitoring well there  
23 (indicating) don't detect TCE.

01:22PM

24 Q. How many monitoring wells are there on site? Fair  
25 to say there's over 200 on the Whittaker site itself?

1 A. Something like that, yes.

2 Q. The reason there's 200 is more monitoring wells  
3 provide you more data?

4 A. It does.

01:22PM 5 Q. Each monitoring well is fairly tiny; is that fair?

6 A. Tiny. We tend to build them 2- to 4-inch diameter.

7 Q. Okay. And those are not pumping wells?

8 A. No.

9 Q. Okay. Someone has to draw a sample from that  
01:22PM 10 non-pumping monitoring well; correct?

11 A. Correct.

12 Q. And compared to the 200 or so monitoring wells, most  
13 of which, I think you told us, were installed after 2002; is  
14 that correct?

01:22PM 15 A. I believe so, yes.

16 Q. Now, compared to those 200-plus monitoring wells on  
17 the Whittaker-Bermite site, aren't there about 20 offsite  
18 monitoring wells that -- that you're aware of?

19 A. Something like that. There are fewer, yes.

01:23PM 20 Q. And in your review of documents in this case, did  
21 you come to learn that the reason there are not more is because  
22 Whittaker has declined to pay for more monitoring wells  
23 offsite?

24 MR. BLUM: Objection, Your Honor.

01:23PM 25 THE COURT: Sustained.

1 Q. (BY MR. RICHARD:) Would you agree that more  
2 monitoring wells offsite would provide more refined data  
3 regarding what's going on in the groundwater?

01:23PM

4 A. Well, as a hydrogeologist, we -- we always want more  
5 data.

6 Q. And you mentioned the mall wells, I believe, in your  
7 direct testimony as having higher detections of certain  
8 contaminants than -- I think you said Saugus 1 and Saugus 2.  
9 Did I get that right?

01:23PM

10 A. I said upgradient water quality.

11 Q. Okay. And what -- did you draw some conclusion from  
12 the difference in concentrations of VOCs?

13 A. Yes, I did.

01:24PM

14 Q. And now we're -- would you agree that one reason you  
15 would expect a difference in concentrations of contaminants is  
16 that -- the mall wells are not pumping wells, are they?

17 A. No, they're not. They're monitoring wells.

18 Q. Right.

01:24PM

19 And the Saugus wells and the other drinking water  
20 wells are extraction wells. They pump at over 2,000 gallons  
21 per minute; correct?

22 A. Well, they are. However, I wasn't referring to the  
23 production wells and comparing wells in that area.

01:24PM

24 Q. Okay. Well, just stick with me here for a second.  
25 In general, would you expect there to be higher

1 concentrations in wells that are not pumping when compared to  
2 wells that are pumping in the same vicinity?

3 A. Could be. Depends on a number of different  
4 factors -- where the monitoring well is screened, where the  
01:24PM 5 production well is pumping from. There's a number of factors,  
6 but generally that could be true.

7 Q. Well, you described the phenomenon of dilution  
8 attributable to pumping wells in your deposition, did you not?

9 A. Yes.

01:25PM 10 Q. And you would agree that at the time of your  
11 deposition, for perchlorate the high observations in the mall  
12 wells could be because the monitoring wells are not pumping as  
13 compared to the four production wells? Is that correct?

14 A. You do get some dilution in production wells, yes.

01:25PM 15 Q. Okay. You talked -- I want to show you a figure --

16 MR. RICHARD: Actually, why don't we look at  
17 Exhibit 34. It's stipulated, Your Honor. It's this report  
18 from CH2M Hill.

19 (Exhibit 34 received into evidence.)

01:25PM 20 MR. RICHARD: This one has the cover letter.

21 Q. (BY MR. RICHARD:) All right. Is this the report  
22 you reviewed, sir?

23 A. Yes.

24 Q. And there's a figure -- what's the page? Yes. I  
01:26PM 25 want to show you page 65.

1 Can you tell us, do you see that figure there on the  
2 right?

3 A. Yes.

01:26PM

4 Q. And these are some of the monitoring wells that you  
5 talked about, the CW wells along that area that CH2M Hill in  
6 their 2015 report had identified as a possible area where  
7 VOCs -- there could be a plume out of that northern area?

8 A. Yes.

01:26PM

9 Q. And for this representation, do you see that that --  
10 those CW-1A, 1B, 1C, although they have non-detect in the  
11 analysis of CH2M Hill -- and these were the folks originally  
12 hired by the Army Corps of Engineers; is that right?

13 A. I believe so. Yes.

01:27PM

14 Q. So is that an accurate representation of what's  
15 going on with that monitoring well, CW-1?

16 A. In what way?

17 Q. It shows it going down a certain level, having  
18 non-detects, but not going all the way down to where he depicts  
19 the groundwater flow.

01:27PM

20 A. Well, what you're referring to as "groundwater flow"  
21 is -- is their conceptual VOC area. It's not based on data.  
22 It's conceptual. And so is it representing what the VOC plume  
23 looks like? It's conceptual.

01:28PM

24 Q. Okay. When you say "it's conceptual," by the time  
25 this report was prepared, had VOCs been detected offsite in any

1 wells, in any of the water agencies' wells?

2 A. Yes.

3 Q. And so -- by the way, when you were talking about  
4 the SIC site, we talked about Richard Slade. You're aware  
01:28PM 5 that, in 2001, Mr. Slade and his company, his associates ran  
6 some pumping tests, injection and pumping tests in that area?

7 A. In 2001?

8 Q. Yes.

9 A. Um, which ones are you referring to? There have  
01:29PM 10 been a number out there. I'm not -- is this -- there's been  
11 pumping and pumping tests for 201, when Saugus 1 and 2 were  
12 restarted. I'm not sure what you're referring to.

13 Q. Sure.

14 You recall reading Dr. Trudell's rebuttal report in  
01:29PM 15 this case; correct?

16 A. Yes.

17 Q. And he talked about pumping tests run in 2001,  
18 injection and pumping tests in the alluvial -- in the Saugus  
19 wells to determine if they were connected to the alluvial  
01:29PM 20 aquifer at that time. Do you recall reading that in his  
21 report?

22 A. I think you're referring to when they restarted --  
23 well, that was 2010 when they restarted Saugus 1 and 2.

24 Q. Oh.

01:29PM 25 A. I'm not quite sure what you're talking about, 2001.

1 Q. So are you familiar with injection and pumping tests  
2 done near Well V-201 by Richard Slade in 2001?

3 A. Yes. I believe I've read about that, yes.

01:29PM

4 Q. And didn't those tests show at that time that the --  
5 the two units, at least in that area of V-201, were not  
6 hydraulically connected?

01:30PM

7 A. Well, I think it's pretty well established that the  
8 two wells are hydraulically connected. Every model that's  
9 ever -- that I've ever looked at that's been run out here  
10 assumes that the alluvial aquifer recharges the Saugus  
11 formation.

01:30PM

12 And so I think it's been pretty well established  
13 that they are hydraulically connected. They're not directly  
14 hydraulically connected. There's a delayed response, for  
15 example, if you pump in the lower unit in the -- in the  
16 alluvial aquifer, but they are connected.

17 Q. But that was a pumping test done where you pump in  
18 one well, then you check for a response in the monitoring wells  
19 and the alluvium -- or the alluvial?

01:30PM

20 A. Right.

21 Q. Okay. And I wanted to ask you -- you had a figure  
22 in your report, I think at page 35. If we could look at  
23 this -- you talked about capture zones?

24 A. Yes.

01:31PM

25 Q. And would you agree that capture zones can be



1 impacted and are impacted by pumping of production wells?

2 A. Well, a capture zone is created by the pumping of a  
3 production well.

4 Q. Right.

01:31PM 5 And if there are --

6 A. It's not influenced by it. It's created by. That's  
7 the definition.

8 Q. For that well?

9 A. For that well, yes. For each well that would be  
01:31PM 10 pumping, if there's more than one, would have a distinct  
11 capture zone.

12 Q. Okay.

13 A. And water molecules can't go to different wells.

14 Q. Right.

01:31PM 15 But the -- would the capture zone of one well be --  
16 say, V-201, be impacted by whether nearby wells were pumping or  
17 not pumping?

18 A. Yes.

19 Q. And that's the notion of a containment well;  
01:32PM 20 correct?

21 A. I'm not quite sure I see the connection. I mean, a  
22 containment well would be one that would be pumping and its  
23 capture zone would contain a certain area.

24 Q. Okay. And for V-201, the -- I'm going to look at  
01:32PM 25 two figures from your report. If we can look at Figure 30,

1 which is Exhibit 1046, page 135. This is one of the figures  
2 attached to your report?

3 A. Yes.

4 Q. And what does this tell us?

01:32PM 5 A. Well, this was a model that was run to try to look  
6 at where the capture zones were for a number of the production  
7 wells.

8 Q. And was this run -- are we looking at this  
9 correctly, that the Saugus 1 and Saugus 2 wells were pumping at  
01:33PM 10 the time?

11 A. Yes.

12 Q. And so would you agree that the capture zone of  
13 Well V-201 would be different during the period of time -- the  
14 13 or 14 years that the Saugus 1 and Saugus 2 wells were shut  
01:33PM 15 down?

16 A. It would be different, yes.

17 Q. And I wanted to ask you if you could -- we'll look  
18 at page 34 of Exhibit 34, summary of findings. If we can find  
19 that.

01:34PM 20 MR. RICHARD: And there's a second paragraph under  
21 "Summary," beginning "Multiple." If we can just enlarge that  
22 paragraph.

23 THE WITNESS: What is this from, sir?

24 Q. (BY MR. RICHARD:) This is from your -- one of the  
01:34PM 25 reports you relied on, CH2M Hill.

1 A. The 2015 report?

2 Q. Yes, sir.

3 A. Thank you.

4 Q. I just want to take you through some of the

01:34PM 5 conclusions of these folks and see which ones you agree with  
6 and which ones you take issue with.

7 So the first sentence says, "Multiple lines of  
8 evidence suggest that the former Whittaker-Bermite facility is  
9 a source of TCE in Saugus 1 and Saugus 2."

01:34PM 10 Do you take issue with that?

11 A. That was not my conclusion. That's correct.

12 Q. And then he goes on to explain, quote, "This  
13 includes the similarities in the distribution of TCE and  
14 perchlorate in the Saugus formation."

01:35PM 15 Do you agree with that for any portion of the Saugus  
16 formation?

17 A. I'm not quite sure what he was referring to,  
18 "similarities in the distribution." We've looked at previously  
19 in my direct testimony the distribution of TCE and perchlorate,  
01:35PM 20 and they were quite different. So, no, I don't think I would  
21 agree with that.

22 Q. Wouldn't the detections onsite in the monitoring  
23 wells show co-location for TCE and perchlorate, again at the  
24 onsite monitoring wells at Whittaker?

01:35PM 25 A. Well, when you're talking about the distribution of

1 TCE, for me, as a hydrogeologist, that means the entire  
2 distribution, the size of the plume. And they are different.  
3 Do some of the wells have both TCE and perchlorate on the  
4 Bermite site? Yes, they do.

01:35PM

5 Q. How about the next sentence, "Detections of VOCs in  
6 source areas in the deeper portions of the Saugus formation  
7 that respond to groundwater production"? I'm not sure what  
8 that means. Maybe that qualifies the first sentence.

01:36PM

9 He points out in the next sentence, quote, "The  
10 general co-location of VOC and perchlorate impacted areas at  
11 the former Whittaker-Bermite facility."

12 You would agree with that; correct?

13 A. I believe I just testified that there are wells on  
14 the Bermite facility that have both TCE and perchlorate.

01:36PM

15 That's correct.

16 Q. And not just wells but in numerous areas throughout  
17 the site where you saw data that in the soil and the soil  
18 vapor, there were detections of perchlorate and VOCs in many of  
19 the same areas?

01:36PM

20 A. One of my opinions in my expert report, that the  
21 source areas were basically the same. Yes.

22 Q. In some cases, though, we find perchlorate and not  
23 VOCs; isn't that true?

01:36PM

24 A. In a few cases. Generally they were co-located and  
25 I -- yes.

1 Q. So after noting co-location and the data that this  
2 expert reviewed in 2015, he concludes: "It follows that  
3 Whittaker-Bermite is a likely source of PCE in Saugus 1 and 2  
4 because TCE and PCE plumes generally overlap on the former  
5 Whittaker-Bermite facility."

01:37PM

6 Do you agree with the second part of that sentence,  
7 that TCE and PCE plumes generally overlap on the former  
8 Whittaker-Bermite facility?

9 A. Uh, no. And I've looked at that data quite  
10 extensively. And TCE moves and migrates with the groundwater  
11 faster than PCE. And so, generally, the TCE -- extent of the  
12 TCE and groundwater at the Bermite site is bigger than the PCE.  
13 PCE doesn't move that fast in groundwater.

01:37PM

14 Q. You'd agree that TCE is the dominant VOC in the  
15 Saugus formation onsite at the Whittaker site?

01:37PM

16 A. I think we see higher concentrations of TCE than  
17 PCE. I would agree with that.

18 Q. And greater volumes of TCE pulled out by CDM Smith  
19 in the soil vapor extraction system you told us about?

01:38PM

20 A. I'm sorry. I -- I did not testify about a vapor  
21 extraction system.

22 Q. Oh. My apologies.

23 So you looked at groundwater data. Did you look at  
24 any data other than groundwater data that is -- contamination  
25 in the soil? Again, just looking at the Whittaker-Bermite

01:38PM

1 site.

2 A. I -- I mean, the data that I looked at -- and I  
3 didn't look at it that extensively -- was in the CDM report  
4 that I referred to earlier.

01:38PM

5 Q. Okay.

6 A. My main interest was generally where source areas  
7 were.

01:39PM

8 Q. I believe you were shown a number of CDM Smith  
9 correspondence. I'd like to -- is it fair to say you reviewed  
10 some materials from CDM Smith in this case?

11 A. I reviewed their -- their report about the source,  
12 you know, identification, their soil data and their soil gas  
13 sampling data, yes.

14 Q. Okay.

01:39PM

15 A. Correspondence? I don't believe I've looked at  
16 correspondence.

17 Q. Did you review any information from CDM Smith that  
18 would indicate, as of late 2018, that there were high residual  
19 VOC concentrations that persist in many locations and depths at  
20 the Whittaker site?

01:39PM

21 A. I have not looked at that, no, sir.

22 Q. Do you have any reason to believe that's not true?

23 A. I have not looked at that kind of data, so I -- I  
24 have no opinion about that. I don't know.

01:40PM

25 Q. Sir, do you have any opinion as to whether TCE and

1 PCE in the soil will continue to migrate into the groundwater?

2 A. I haven't looked at recent soil data, so I don't  
3 know.

01:40PM

4 Q. If there are VOCs in the soil, would you expect  
5 that -- if they're above the groundwater table, that they'll  
6 continue to migrate to groundwater?

01:40PM

7 A. Well, it's a pretty basic principle. If there  
8 are -- if there is TCE in the -- in the soil, here or anywhere  
9 else, and it rains and some of the water infiltrates, it will  
10 dissolve that TCE and slowly migrate down to the water table.

11 Q. And I wanted to ask you, you talked about wells at  
12 one edge of the Whittaker site. So maybe we can look at maybe  
13 Exhibit 180, which is already in evidence, stipulated to.

14 And so on this Exhibit 180, can you see that?

01:41PM

15 A. Yes.

16 Q. And we see on that western portion of the Whittaker  
17 site three black dots. Those represent those monitoring wells  
18 in those areas?

19 A. Yes.

01:41PM

20 Q. And I don't think you were asked this on direct.  
21 But weren't those wells -- two of those wells installed in  
22 2011?

23 A. Well, I don't have the dates they were installed  
24 memorized, but they may have been, yes.

01:41PM

25 Q. And you said that --

1 THE COURT: Could you give us an idea as to which  
2 wells you may be referring to?

3 MR. RICHARD: Sure.

01:41PM

4 Q. (BY MR. RICHARD:) Of those -- there are three  
5 wells -- three monitoring wells here. One of those wells was  
6 installed in -- what? -- 2004 and two were installed in 2011;  
7 is that correct?

01:42PM

8 A. There's actually 16 wells there, sir. But there --  
9 I believe there are three wells here (indicating), two wells  
10 here (indicating), and 11 wells here (indicating).

11 Q. Right.

12 And when you say there are 11 wells, that's because  
13 they monitor different depths?

01:42PM

14 A. They sample different vertical depths, that's  
15 correct.

16 Q. But they're each 2 or 3 or 4 inches in diameter?

17 A. That's generally how we construct monitoring wells,  
18 yes.

01:42PM

19 THE COURT: So let me now understand this. So are  
20 there actually three wells but they have different -- they're  
21 screening wells so that they -- when you say 11, one of the  
22 wells will actually sample at 11 different parts of the -- of  
23 the earth?

24 THE WITNESS: That's correct, Your Honor.

01:42PM

25 THE COURT: All right. But there are actually --



1 from just a visual, looking at a well, there are three wells  
2 there?

3 THE WITNESS: Well, in -- in two of the locations, I  
4 believe these are separate -- literally separate pipes,  
01:43PM 5 separate wells in the ground.

6 So, for example, up here (indicating), I believe  
7 there are three separate wells, but they're very close to each  
8 other. And they're sampling different vertical depths. In  
9 other words, different layers of the Saugus.

01:43PM 10 THE COURT: Understood.

11 All right. Thank you.

12 Q. (BY MR. RICHARD:) And so you said -- you were asked  
13 a couple of times, there have been detections of TCE in those  
14 wells but rarely. Is that --

01:43PM 15 A. Yes.

16 Q. Okay. And for the -- and you would agree that,  
17 before 2011, if there were no monitoring wells, you have no  
18 information as to whether there was TCE in the groundwater in  
19 that area prior to 2011?

01:43PM 20 A. Well, the wells that were there before 2011, yes, we  
21 have that data. But pretty logical that if -- if you don't  
22 have data prior to when you start collecting data, yes, you  
23 don't know -- you don't know what's going on there. That's  
24 correct.

01:44PM 25 Q. And which of the three wells or well clusters is the

1 MP-01?

2 A. It's the southernmost, this one here (indicating).

3 Q. And that was the one that was installed in 2002 or  
4 so?

01:44PM

5 A. I don't have the dates of installation memorized,  
6 but it may have been.

7 Q. And if we could pull up Exhibit 189. This is  
8 already in evidence.

01:44PM

9 And you were shown this briefly in your direct  
10 testimony, I believe.

11 A. I was.

01:44PM

12 Q. And so for the detections of TCE noted in this  
13 figure, there are a number of detections of TCE, what you call  
14 rare detections, in those monitoring wells after they were  
15 installed, whether it was 2011 or some other date.

16 You're not questioning -- you're not attributing any  
17 of those to lab error, are you?

18 A. I actually don't know what they're due to, and I  
19 really didn't address that.

01:44PM

20 What I was interested in, based on this data, was  
21 there a TCE plume moving through this area? And based on very  
22 limited detections of TCE, the conclusion was, no, there's not.

23 Q. No, I -- that was your conclusion, but other experts  
24 have looked at the same data and -- and reached other

01:45PM

25 conclusions; correct?

1           A.     Uh, I believe some of your experts have suggested  
2     that Bermite is the source of contamination in the production  
3     wells. But looking at this as a hydrogeologist, to have  
4     literally a handful of detections of TCE means that the plume  
01:45PM 5     is not moving through this area.

6           As I described earlier, TCE absorbs to the soil as  
7     it moves through it. And so if you don't see detections for  
8     nine years, TCE is not moving through there.

9           Q.     So what --

01:46PM 10          A.     And hasn't moved through there.

11          Q.     You don't have an opinion -- as to the TCE that is  
12     found in this particular area, you don't know where that TCE  
13     came from; is that fair?

14          A.     Not exactly sure, no.

01:46PM 15          MR. RICHARD: And if we could go back to Exhibit --  
16     Figure 42 from his report.

17          Q.     (BY MR. RICHARD:) And this arrow, you told us  
18     earlier -- if we can look at this arrow down here, do you  
19     believe that arrow fairly represents the groundwater flow  
01:47PM 20     direction in that area?

21          A.     Generally, that's what the groundwater flow maps  
22     show, yes, and even a little bit more to the southwest. So  
23     it's to the west, southwest in that area.

24          Q.     And is it -- are you not comfortable using the term  
01:47PM 25     "plausible pathways" or pathways within the geology, beneath

1 the surface of the ground?

2 A. Actually, I have used that term myself, yes.

3 Q. Okay. And pathways, fair to say that they can  
4 originate with the source area?

01:47PM 5 A. Well, by definition, yes. I mean, you're interested  
6 in where contaminants are moving away from a source area, yes.

7 Q. Okay. And did you evaluate potential pathways from  
8 each of the source areas of TCE at the Whittaker-Bermite site?

9 A. In a general way, yes.

01:48PM 10 And -- and I want to explain that a pathway isn't a  
11 line. And we went over this in my direct testimony. You can  
12 see the pathway that perchlorate has taken. This is the big  
13 orange blob, I think the words you used -- oops, I didn't mean  
14 to do that -- and the pathway that the perchlorate has taken  
01:48PM 15 from the Bermite site is to the northwest. That is the  
16 pathway.

17 Q. From above -- so this way and that way (indicating)?  
18 Sorry.

19 A. Well, there's multiple sources on the site, as we  
01:48PM 20 discussed earlier. And so from these sources, as the  
21 perchlorate migrates, one, it's subject to dispersion; two,  
22 it's subject to a widening due to a varying groundwater flow.  
23 And so the pathway that you end up with is this big orange  
24 blob. It's moving to the northwest.

01:49PM 25 Q. Right.

1 But the plume's not of uniform concentration or -- I  
2 mean, it has numerous variations based on the hydrogeology and  
3 composition of the aquifers and soil; isn't that correct?

01:49PM 4 A. I don't know if I completely understood that. But  
5 the area that's in orange, monitoring wells and production  
6 wells within that area have all shown detections of  
7 perchlorate.

8 Q. Okay.

01:49PM 9 A. So that is the area that's been impacted. And  
10 that's what we call a plume. It's the word we use for that.

11 Q. Right.

01:49PM 12 And so I believe you answered this earlier. But for  
13 the areas identified as question marks in this report from  
14 CH2M Hill that you attached, at least this figure, to your  
15 report, do you -- it's your testimony you have no idea what  
16 those -- what those question marks refer to?

17 A. No. I believe I testified to that. When we put  
18 question marks on contour lines, that means we're uncertain  
19 about it.

01:50PM 20 Q. Okay. Because there's not sufficient data?

21 A. Yes.

01:50PM 22 Q. And at the time you prepared your report in this  
23 case, I think you told us that one of your opinions was  
24 perchlorate and VOCs at the Whittaker site were generally  
25 released to the same source areas?

1 A. Yes.

2 Q. Not always but generally?

3 A. Yeah.

01:50PM 4 Q. Okay. And you -- you noted that -- in your review  
5 that Ms. Stanin reached the same conclusion; is that fair?

6 A. Yes.

7 Q. Is it fair to say that at the time you prepared your  
8 report, the data showed wide -- the widespread extent of  
9 groundwater contamination beneath the Whittaker site?

01:50PM 10 A. Could you repeat that? I didn't completely  
11 understand that.

12 Q. Sure.

13 At the time you prepared your report, would you  
14 agree that the groundwater data showed widespread groundwater  
01:51PM 15 contamination beneath the Whittaker site?

16 A. Well, we don't usually use the word "widespread."  
17 However, yes, there was -- quite a few of the wells showed  
18 perchlorate contamination and a number of the wells showed TCE  
19 also.

01:51PM 20 Q. And you also reached the conclusion that at least --  
21 so there's the same source areas. The perchlorate and VOCs  
22 travel the same general pathway to the groundwater and then in  
23 the groundwater beneath the Whittaker site; correct?

24 A. Yes.

01:51PM 25 Q. And so your -- there's no doubt in your mind that

1 there's what you would call a plausible pathway from the  
2 Whittaker site for contaminants to travel in groundwater to  
3 each of the wells at issue in this case?

01:52PM 4 A. The perchlorate has shown that. As we talked about  
5 earlier, you can use perchlorate as a tracer. The big  
6 difference is that -- and this is something that's been well  
7 established in the science of -- of fate and transport of  
8 chemicals -- that TCE moves slower than perchlorate and PCE  
9 moves even slower than TCE. And so perchlorate has traveled  
01:52PM 10 much farther than TCE or PCE has.

11 Q. Right.

12 And I think you told us this earlier. But you have  
13 no idea how much TCE was released at the Whittaker site into  
14 the environment in the '40s, '50s, '60s, or '70s; correct?

01:52PM 15 A. I didn't look at that. I was focusing on the  
16 groundwater data.

17 Q. Okay. And so the reason that perchlorate can reach  
18 each of the wells at issue in this case is because the aquifers  
19 are connected and the groundwater from Whittaker travels to  
01:53PM 20 those -- those wells?

21 A. I think that's a fair statement, yes.

22 MR. RICHARD: Okay. I think that's all I have.  
23 Thank you.

24 THE COURT: Mr. Blum?

01:53PM 25 MR. BLUM: Thank you, Your Honor.

**REDIRECT EXAMINATION**

BY MR. BLUM:

Q. Mr. Hokkanen, did you review the deposition of somebody called B.J. Lechler?

A. Yes.

Q. And who is Mr. Lechler?

A. Mr. Lechler, I believe, was the main author of the CH2M Hill report that we referred to.

Q. That's the one that you were asked about by Mr. Richard?

A. Yes.

Q. And in his deposition, did Mr. Lechler say anything about what his conclusions were regarding the source of the VOCs in the offsite wells?

A. He couldn't conclude that -- that it was -- that it was Bermite. He -- he had some hypothetical -- he had some hypothetical routes to the wells, but he couldn't conclude it was Bermite.

Q. Now, for the -- I'm going to talk about the mall wells.

Have you -- have you actually participated in the -- in actual groundwater monitoring?

A. At this site or any site?

Q. Any site in your career.

A. Many times, yes.



1 Q. Is there a standard practice that's followed when  
2 you are testing a well that you haven't tested for a while  
3 called "purging" the well first?

01:54PM 4 A. Yes. What we're worried about is there's been water  
5 possibly just standing in the well for a period of time. We  
6 don't want to analyze that water. We want to analyze the water  
7 surrounding that. So we evacuate a certain amount of water to  
8 make sure we're getting water from the aquifer itself.

01:55PM 9 Q. Okay. Now, the questions you had from Mr. Richard  
10 about do certain wells -- if they're monitoring wells, do they  
11 accumulate concentrations if they haven't been monitored for a  
12 while. Does purging solve that problem?

01:55PM 13 A. Yes. You're actually, again -- you take out a  
14 certain amount of water. Not only what's been sitting in the  
15 well for a period of time, but you also take out enough so  
16 you're -- make sure that you're sampling the aquifer water,  
17 getting a representative of -- what we call representative  
18 groundwater.

01:55PM 19 Q. And do you have any reason to believe that when they  
20 sampled the mall wells or the library wells or the DW wells,  
21 that they -- the people who sampled it didn't do it properly?

01:56PM 22 A. I didn't look specifically at field logs. However,  
23 we've established many, many years ago, very standard  
24 practices, as you mentioned, for sampling wells and that is one  
25 of the standard practices.

1 Q. Now, the concentrate -- now, what opinion do you  
2 have, if any, about the significance of the concentrations of  
3 the VOCs found at those mall wells, library wells, or DW wells?  
4 What -- are they significant in any way?

01:56PM

5 A. Well, what I did -- what I did was compare those  
6 concentrations to concentrations, for example, seen in the  
7 wells on the western boundary of OU-4, the wells -- in the  
8 sentry wells that I discussed 500 feet away from Saugus 1,  
9 CW-01, wells south of OU-4. The concentrations that are found  
10 up near 201 and 205 are higher than any of those  
11 concentrations.

01:56PM

12 Q. Well, they were around 15 parts per billion;  
13 correct?

14 A. Correct.

01:56PM

15 Q. And on those wells near the site, was there anything  
16 even above 1 or 2 parts per billion?

17 A. On the edge of the plume? No.

18 Q. As a hydrogeologist, as plumes move further, do  
19 concentrations increase or decrease?

01:57PM

20 A. Well, they decrease. And one of the main reasons  
21 that -- in my direct is this concept of dispersion. The other  
22 thing dispersion does besides making a plume wider is it  
23 dilutes the concentrations in the groundwater. There's mixing  
24 that goes on.

01:57PM

25 Q. So is there any way for concentrations that are near

1 the Whittaker site of 2 to create readings about a mile away  
2 that are 15?

3 A. No. That -- it -- like you said, it goes down, not  
4 go up.

01:57PM 5 Q. It would violate the laws of physics, wouldn't it?

6 A. Yes.

7 Q. All right. Now, um, I want to talk about the  
8 pumping test that was referred to. Um, how long did Mr. Slade  
9 pump those wells?

01:58PM 10 A. I don't think it was that long. It was a matter  
11 of --

12 Q. Was it ten days?

13 A. Excuse me?

14 Q. Was it about ten days?

01:58PM 15 MR. RICHARD: Objection.

16 THE WITNESS: Yeah, it wasn't too long and --

17 THE COURT: Hold on. The objection is sustained.  
18 The jury is to disregard the response.

19 And, Mr. Blum, please make sure you ask questions.

01:58PM 20 Q. (BY MR. BLUM:) Do you know if it was less than two  
21 weeks?

22 A. I believe it was a fairly short period of time, like  
23 two weeks or so, yes.

24 Q. Would that pump test be comparable to V-201 pumping  
01:58PM 25 for ten years?

1 A. No.

2 Q. Why?

3 A. Well, Saugus 1, where they were pumping -- Saugus 3  
4 and below where they were pumping in that production well is  
01:58PM 5 not directly connected to the alluvial aquifer. What you get  
6 eventually, what we call a delayed response, is you lower the  
7 water level in the Saugus formations, water will start to  
8 slowly move down and lower the water table in the alluvial  
9 aquifer. It takes a while.

01:59PM 10 Q. More than a couple of weeks?

11 A. It can, yes. Depends on, you know, the conditions  
12 and the separation and this sort of thing. But you don't get  
13 an immediate response. You get what we call the delayed  
14 response.

01:59PM 15 Q. Now, the -- the plume map that we saw from the  
16 CH2M Hill report, you recall this was the one that had the  
17 orange that was perchlorate?

18 A. Yes.

19 Q. And then it had a PCE or a -- a VOC plume that was  
01:59PM 20 on the -- the site; correct?

21 A. On the Bermite site. Similar to all the other plume  
22 maps we look at for TCE, yes.

23 Q. All right. If we look at the different travel times  
24 and rates, would you agree that TCE generally is -- travels at  
01:59PM 25 38 percent or 40 percent of the speed that perchlorate goes?

1 A. Well, perchlorate moves slower. Okay?

2 Q. Perchlorate?

3 A. Sorry. PCE. PCE moves the slowest, TCE moves a  
4 little faster than PCE, and perchlorate essentially moves at  
02:00PM 5 the same rate as groundwater does. It's not -- doesn't stick,  
6 as I talked about, to the soil. It's not retarded. It moves  
7 at essentially the same rate.

8 Q. Okay. When you look at that map and you look at  
9 those two plumes, do those plumes pretty well match the speed  
02:00PM 10 differences between the two?

11 A. Well, there's -- in my field, there's been a  
12 tremendous amount of research trying to understand this  
13 retardation of chlorinated chemicals like TCE and PCE. And  
14 what we found over the decades of looking at plumes and -- and  
02:00PM 15 tracer studies and this sort of thing is that TCE moves at  
16 anywhere from, generally speaking we see in the field, two to  
17 three times slower than the groundwater moves. It can move a  
18 little bit slower than that, but generally that's what we see.

19 Q. So we would expect to see the -- that a TCE plume  
02:01PM 20 being between 33 and 50 percent of a perchlorate plume?

21 A. Something like that, yes.

22 Q. And does that match how the plumes are drawn by  
23 Mr. Lechler?

24 A. Pretty closely, yes.

02:01PM 25 Q. Um, the -- oh. By the way, just for -- in terms of

1 speed through the soil, what moves faster? Perchlorate or  
2 VOCs?

3 A. Through the soil?

4 Q. Yes.

02:01PM

5 A. Similar to groundwater, perchlorate's going to move  
6 basically with the water. TCE is going to move slower than the  
7 water moves.

8 Q. Okay. Last set of questions, and it's about 201 and  
9 205.

02:01PM

10 In 201, perchlorate was found before it was found in  
11 205; correct?

12 MR. RICHARD: Objection. Leading.

13 THE COURT: Sustained.

02:02PM

14 Q. (BY MR. BLUM:) When was the -- when was perchlorate  
15 found in 205 and 201 in relation to what was first?

16 A. I think it was 201 first and then a few years later  
17 205.

18 Q. How about VOCs?

02:02PM

19 A. Well, VOCs were first detected in 205, the one  
20 that's farther away, then 201.

21 Q. What does that tell you?

02:02PM

22 A. Well, again, it's -- if that's the case, if TCE is  
23 migrating from the east, it would be detected in 201 first and  
24 then 205. And it was detected in 205 first and then 201. And  
25 what that means to me, it's not coming from the east. It's

1 coming from somewhere else.

2 MR. BLUM: That's all, Your Honor.

3 MR. RICHARD: Just a couple points.

4 THE COURT: Yes.

02:02PM

5 **RECROSS-EXAMINATION**

6 BY MR. RICHARD:

7 Q. You were just asked a question about if we find a  
8 higher concentration in a well, one monitoring well, it would  
9 defy -- defied the law of physics if there -- to suggest that  
10 it emanated from an area with a detection that had a lower  
11 concentration. Did I hear that right?

02:03PM

12 A. Well, I think --

13 Q. Did I hear that right?

14 A. Can I answer the question?

02:03PM

15 Q. Sure.

16 A. Um, the idea is that concentration in groundwater  
17 doesn't go up due to dilution, primarily dispersion. If you  
18 have, let's say, 50 here and you look downgradient of that,  
19 it's not going to be over 50.

02:03PM

20 Q. Okay. Can we -- you would agree, though, that  
21 general principle doesn't apply where you have numerous sources  
22 of VOCs in varying concentrations; correct?

23 A. Well, I was comparing that the -- for example, the  
24 library and mall well data with monitoring wells data east of  
25 that, basically on the far edge of the TCE plume. That's what

02:03PM

1 I was comparing to.

2 Q. Right.

3 And it's your opinion here today on behalf of  
4 Whittaker that, even though there's only 20 or so offsite  
02:04PM 5 monitoring wells ever installed, compared to the 200 onsite,  
6 that there's more than sufficient information for you on behalf  
7 of Whittaker to delineate the precise scope of that TCE plume;  
8 right?

9 A. Well, I -- that's the conclusion I came to.

02:04PM 10 MR. RICHARD: Okay. And so if we could look at  
11 Exhibit 169, some groundwater data. This is already in  
12 evidence, Your Honor.

13 Q. (BY MR. RICHARD:) What I wanted to ask you, if we  
14 look at the map in the upper left-hand quadrant of Exhibit 169.

02:04PM 15 A. Yes.

16 Q. And so that's TCE in groundwater; correct?

17 A. Yes.

18 Q. And if we look at the western boundary here  
19 (indicating) where we see purple dots -- do you see that?

02:05PM 20 A. I see that.

21 Q. And each of those purple dots represents a cluster  
22 of monitoring wells that Whittaker was required to install on  
23 its site at some point after 2002; correct?

24 A. I believe so, yes.

02:05PM 25 Q. And those concentrations are higher than some of the



1 concentrations to the east of those monitoring wells; correct?

2 A. Yes.

3 Q. And it's fair to say that, although there's a

4 cluster -- a line of monitoring wells in that area of the

02:05PM

5 Whittaker site, there are very few offsite wells once we move

6 off of the Whittaker site. There's -- one, two, three -- maybe

7 six for that -- thousands of feet to the west. Do you see

8 that?

9 A. I see the wells, yes.

02:05PM

10 Q. Okay. And so when we see -- so on the Whittaker

11 site, just looking at that data, we have green dots and yellow

12 dots to the east of those purple dots, which are the highest

13 concentration; correct?

14 A. I'm sorry. Could you repeat that? I -- I lost you

02:06PM

15 there.

16 Q. Sure.

17 We see green dots and yellow dots to the east of

18 those red dots on this TCE and groundwater concentration map;

19 correct?

02:06PM

20 A. There are different colored dots, that's correct.

21 Q. And each of those colored -- different colored dots

22 represents a different concentration of TCE; correct?

23 A. I want to clarify my answer to that question.

24 First of all, you have to realize that this

02:06PM

25 particular map includes every single layer. There's no

1 differentiation between 1, 3A, 3C, or 5. And then every single  
2 year -- so it's an accumulation of all of the data. It doesn't  
3 really give you the picture of what's going on out there.

4 Okay?

02:07PM

5 In my mind, it really doesn't show -- and we went  
6 over all of this before. For example, the green dots over on  
7 the western boundary here, it looks like there's TCE moving  
8 through there. And as I went through in some detail, there's  
9 very, very few detections there.

02:07PM

10 Q. Okay. But we can agree that the purple dots are the  
11 highest concentration for when those samples were obtained;  
12 correct?

13 A. In -- in some aquifer that I'm not quite sure which  
14 one it is. We'd have to look at the specifics.

02:07PM

15 Q. Okay. And you -- thank you.

16 You talked just a minute ago about the -- comparing  
17 the rendition of the perchlorate plume to the partial rendition  
18 of that VOC plume. Isn't it correct that the spread, the  
19 extent of the perchlorate plume has been dramatically impacted  
20 by the pumping of the wells, Saugus 1 and Saugus 2?

02:07PM

21 A. Well, both the perchlorate plume and the TCE plume  
22 have been impacted by pumping. That's a correct statement.

23 Q. So wouldn't one have to be very careful, being a  
24 scientist, to draw conclusions about the extent of the  
25 migration of a plume that has been dramatically impacted by

02:08PM

1 wells that are pumping, in part, to contain the scope of that  
2 perchlorate migration?

3 A. That was a pretty long question. Could you -- I'm  
4 sorry. Could you repeat that?

02:08PM

5 Q. You would agree that the scope -- drawing  
6 conclusions about where the plume is, it's dramatically  
7 different if wells are pumping versus no wells are pumping?

02:08PM

8 A. Well, what I did is look at the monitoring well data  
9 to see where -- for example, let's talk about TCE. Using the  
10 monitoring well data, you can determine where TCE is and where  
11 it isn't. How it got there is through different hydraulic  
12 responses. Pumping -- like I mentioned before, rainfall  
13 events, droughts, et cetera, et cetera.

02:09PM

14 What the data is is a representation of where those  
15 chemicals have moved over a long period of time. The different  
16 influences are hard to discern exactly. The data, it speaks  
17 for itself, as they say.

02:09PM

18 Q. Well, the data doesn't speak for itself as to the --  
19 you can't quantify the distance that the perchlorate plume  
20 would have traveled but for the containment wells and the wells  
21 at Saugus 1 and 2 pumping at 2- or 3,000 gallons per minute;  
22 correct?

23 A. Well, there would be a difference, pumping or no  
24 pumping, that's correct.

02:09PM

25 Q. And you would expect that the rendition showing how

1 far that perchlorate plume had extended would be less if those  
2 containment wells were doing their job; is that fair?

3 A. I haven't really looked at that. That's a  
4 possibility, but I haven't really examined that.

02:09PM

5 Q. So conceptually, you think the perchlorate plume  
6 traveled farther than it otherwise would have with those Saugus  
7 wells pumping at 2- to 3,000 gallons per minute? Or you just  
8 haven't looked at it?

9 A. I mean, conceptually, that's a possibility, yes.

02:10PM

10 But I don't think anyone's really examined that.

11 Q. Okay. And so before you draw conclusions comparing  
12 how far the perchlorate plume has been identified and how far  
13 the rendition for a VOC plume have traveled, wouldn't you need  
14 more information as to the impact of those pumping wells on how  
15 fast the perchlorate plume is actually migrating?

02:10PM

16 A. Well, the -- the -- I really -- if you look at my  
17 expert report carefully, I really didn't use how fast these  
18 plumes have moved as part of my conclusion.

19 Q. Right.

02:10PM

20 A. What I looked at was the water quality data.

21 Q. I understand.

22 A. Where is TCE? Where isn't TCE? How fast it got  
23 there, how fast it's moving, that was not part of my analysis.

24 Q. Right.

02:11PM

25 And so even though that wasn't part of your

1 analysis, when Whittaker's attorney asked you the question  
2 about comparing the relative size of the plumes, you generally  
3 agreed with him a minute ago; right?

4 MR. BLUM: Argumentative.

02:11PM

5 THE COURT: Sustained.

6 Q. (BY MR. RICHARD:) And you just said that you didn't  
7 look at -- if I read your report carefully, you did not look at  
8 the speed of travel of any of the contaminants; correct?

9 A. Yeah.

02:11PM

10 Q. And I think you told us earlier, that's something  
11 that folks in your line of work sometimes calculate but it's  
12 not something you calculated in this case?

13 A. That's correct.

02:11PM

14 Q. You would agree that the velocity of groundwater  
15 varies by the -- in this case whether we're in HSU-3, 3A, 3C,  
16 5, it can be different for each of those HSUs?

17 A. Yes.

18 Q. And one would not want to just average those to draw  
19 conclusions about the rate of travel of contaminants; is that  
20 fair?

02:12PM

21 A. That would be something that I wouldn't do.

22 MR. RICHARD: Thank you very much.

23 MR. BLUM: If you could -- oops. 169.

24 ///

02:12PM

25 ///

**FURTHER REDIRECT EXAMINATION**

BY MR. BLUM:

Q. Mr. Hokkanen, I want you to focus on this area right here (indicating).

A. Okay.

Q. And you see the legend down there?

A. Yes.

Q. Purple. What's the concentration of purple?

A. Greater than 100 times MCL.

Q. What is, um, the yellow?

A. MCL to ten times the MCL.

Q. What is the green?

A. Non-detect to MCL.

Q. What is the white?

A. Non-detect.

Q. Is that what you would expect to see as the plume moves out, it decreases?

A. Generally speaking, if you're beyond the source areas, yes.

MR. BLUM: Thank you.

MR. RICHARD: Just one last question, Your Honor.

THE COURT: Yes.

**FURTHER RECROSS-EXAMINATION**

BY MR. RICHARD:

Q. We can agree that contaminants in groundwater shown

1 by that -- all those purple dots at an MCL -- let's see,  
2 concentration, 100 times the MCL -- that groundwater with those  
3 levels of high contaminants doesn't under normal conditions  
4 just stop at the ownership line or the property line; correct?

02:13PM

5 A. Some people have argued that in the past, but I  
6 don't believe that's true.

7 Q. You would expect it would continue to travel past  
8 the --

9 A. In some direction, yes.

02:13PM

10 MR. RICHARD: All right. Thank you.

11 THE COURT: All right. You're excused. Please  
12 watch your step going down.

13 THE WITNESS: Thank you, Your Honor.

14 THE COURT: Let's go ahead and call your next  
15 witness, please.

02:13PM

16 MR. GALLAGHER: Whittaker would call Tim Simpson.

17 THE COURTROOM DEPUTY: Good afternoon, sir. Please  
18 come forward. Would you please stand right there so I can  
19 swear you in.

02:14PM

20 Raise your right hand to be sworn, sir.

21 Do you solemnly swear that the testimony you shall  
22 give in the cause now before this Court shall be the truth, the  
23 whole truth, and nothing but the truth, so help you God?

24 THE WITNESS: I do.

02:15PM

25 THE COURTROOM DEPUTY: Thank you. Please be seated.

1 THE WITNESS: Thank you.

2 THE COURTROOM DEPUTY: Sir, for the record, would  
3 you please state your name and spell your last name.

4 THE WITNESS: Timothy Sean Simpson, S-i-m-p-s-o-n.

02:15PM 5 THE COURT: Mr. Gallagher.

6 MR. GALLAGHER: Thank you, Your Honor.

7 **TIMOTHY SIMPSON,**

8 **DEFENDANT'S WITNESS, WAS SWORN AND TESTIFIED AS FOLLOWS:**

9 **DIRECT EXAMINATION**

02:15PM 10 BY MR. GALLAGHER:

11 Q. Mr. Simpson, what do you do for a living?

12 A. I'm an environmental engineer consultant.

13 Q. Okay. And what does that generally entail?

14 A. Um, well, I help clients deal with environmental  
02:15PM 15 matters, whether it's groundwater issues, surface water issues,  
16 environmental compliance, whole litany of problems that  
17 businesses in California have to deal with.

18 Q. And can you give us a little bit of your background,  
19 how you got to be in the position that you're in?

02:15PM 20 A. Sure. So I have a bachelor's of science in civil  
21 engineering from Gonzaga University in Spokane, Washington.  
22 And then I went on to get my master's degree in civil  
23 engineering from University of California at Irvine. I've been  
24 working for about 35 years in my profession. I'm a licensed  
02:16PM 25 civil engineer in California, licensed geotechnical engineer in



1 California.

2 Q. And are you generally familiar with the  
3 Whittaker-Bermite site, as we've been referring to?

4 A. I am.

02:16PM 5 Q. Okay. And what was your first involvement at that  
6 site?

7 A. I would say it's probably about 17 years ago. I was  
8 originally involved in the -- in the initial litigation between  
9 Castaic Lake Water Agency and Whittaker. And I was one of  
02:16PM 10 their consultants and experts during that initial litigation.  
11 That ended up in a -- we had a settlement agreement. There was  
12 first an interim settlement agreement that went on for a few  
13 years. And then after that, there was a final settlement  
14 agreement.

02:17PM 15 MR. RICHARD: Your Honor, object to the narrative.  
16 If we can have a question.

17 THE COURT: Yes. Sustained at this point.

18 Q. (BY MR. GALLAGHER:) And following the settlement  
19 agreement, did you continue to serve in any type of capacity at  
02:17PM 20 the Bermite site on behalf of Whittaker?

21 A. Yes. I have been Whittaker's representative in  
22 monthly meetings since the 2007 settlement agreement. It went  
23 on about 14 years.

24 Q. And what's the nature or genesis of those monthly  
02:17PM 25 technical meetings? Why are they happening?

1           A.     Well, we're working together on the Saugus 1 and 2  
2     treatment facility that was installed and funded by Whittaker  
3     to deal with perchlorate coming from the Bermite site.

02:17PM

4           Q.     When you say "we" are working together, who are the  
5     "we"?

6           A.     Number of representatives from the water agency,  
7     myself, a couple of my colleagues, Department of Toxic  
8     Substances Control, and State Water Resources Control Board,  
9     Department of Drinking Water, or DDW.

02:18PM

10          Q.     Now, in this matter, you're serving two roles for  
11     us, are you not? You're designated as an expert; correct?

12          A.     It's my understanding.

13          Q.     Okay. And you also served as a percipient witness  
14     in a number of matters. Is that accurate?

02:18PM

15          A.     Yes.

16          Q.     Okay. Focusing on your percipient knowledge, do you  
17     recall in March of 2018 receiving notice from the -- from the  
18     SCV Water Agency regarding perchlorate detections in V-205?

19          A.     I do.

02:18PM

20          Q.     And can you tell us how you received the actual  
21     notice?

22          A.     I believe it was a written notification -- well,  
23     back up from there. I mean, we were -- it's something we  
24     discussed is what's going on in the -- in the -- you know, with  
25     the nearby production wells in addition to Saugus 1 and 2.

02:19PM

1 It's part of our -- our meeting agenda.

2 Q. That's a good point. Let's take a step back.

3 Um, you're involved in the remedy to address the  
4 offsite perchlorate contamination; correct?

02:19PM

5 A. Not directly. My colleague Hassan Amini takes the  
6 lead on that, but I'm aware of what's going on.

7 Q. Are you involved in the -- obviously the technical  
8 meetings discussing the success, if you will, or -- or efficacy  
9 of this Saugus Perchlorate Treatment Facility and its ability  
10 to address the issues like perchlorate?

02:19PM

11 A. You need to explain the question a little bit.

12 Q. Yeah. Sorry.

13 A. We have a perimeter containment system, and then we  
14 have the Saugus 1 and 2 treatment system.

02:19PM

15 Q. And what was the point of implementing the Saugus  
16 Perchlorate Treatment Facility?

17 A. The idea was to prevent future -- additional wells  
18 from being shut down from a migrating plume and also to provide  
19 potable water supply, to restore water supply for the agency.

02:20PM

20 Q. And do you recall, as you sit here today, the first  
21 time perchlorate detections arose in V-201?

22 A. Off of memory, no. But I'm not going to guess.

23 Q. But -- and in terms of a general linear fashion,  
24 you -- can you tell me what comes first after the site, which  
02:20PM 25 wells were impacted?

1           A.     Well, 201 was the first well, the offsite well that  
2     was impacted.

3           Q.     Before that, is the Saugus -- is S-1 and S-2 closest  
4     to the site?

02:20PM   5           A.     Oh, I'm sorry. Yes.

6           Q.     Okay.

7           A.     So Saugus 1 and 2 are closest to the site,  
8     originally installed there with the goal of containing the  
9     plume, preventing future -- additional migration that might  
02:20PM   10    impact other wells.

11          Q.     And of the wells, Saugus 1 and 2, do you know which  
12    one is closer to the site?

13          A.     I believe Saugus 2 is closest.

14          Q.     So then you're saying -- the site, then you have  
02:21PM   15    Saugus 2, Saugus 1. Which well is next in that linear path  
16    going away from the site?

17          A.     It would be Well 201 and then 205 after that.

18          Q.     Okay. And you received notice at some point --  
19    strike that.

02:21PM   20                At some point in time after the S-1, S-2, and Saugus  
21    Perchlorate Treatment Facility was installed and operating, at  
22    some point did V-201 become impacted with perchlorate?

23          A.     It did.

24          Q.     Okay. And do you know what was done in response to  
02:21PM   25    that detection?

1           A.     Well, sure. We -- we agreed with the plaintiff that  
2 we needed to put -- I'm sorry -- with the water agency. There  
3 was no lawsuit at the time. We agreed that we needed to put  
4 wellhead treatment at V-201 as quickly as possible to prevent  
02:21PM 5 future migration. We had very aligned interest in that regard.

6           Q.     And you agreed to do that. Was that done?

7           A.     It was.

8           Q.     And do you know when the -- what type of treatment  
9 system was installed there?

02:22PM 10           A.     Anion exchange wellhead treatment system located  
11 right behind the Whole Foods Market.

12           Q.     And in comparing that treatment system to the SPTF,  
13 can you describe the similarities or differences?

14           A.     Well, it's -- it's using ion exchange media. It's  
02:22PM 15 the same media, which has proven to be very effective, at both  
16 sites.

17                   The difference between the Saugus 1 and 2 project  
18 and the V-201 project is the amount of piping that it took  
19 to -- to complete the project. Saugus 1 and 2 is -- does not  
02:22PM 20 use wellhead treatment. There is a whole network of piping  
21 that had to be installed to convey the water to a single place  
22 where it could be treated and then blended with water that  
23 comes down from the Rio Vista treatment plant before it was --  
24 it's distributed to the customers.

02:23PM 25           Q.     Versus 201, how was that --

1           A.     201, the -- we call it that wellhead treatment where  
2     there's a wellhead and you -- you place treatment vessels right  
3     next to that -- that -- that well, hook it up. And it's a much  
4     simpler project.

02:23PM

5           Q.     In terms of the SPTF, when did that go online, if  
6     you know, if you can recall?

7           A.     I think it was around 2007, if I'm not mistaken.

8           Q.     And for V-201, after the wellhead treatment was  
9     installed, do you recall when that went -- gone online?

02:23PM

10          A.     Here's a memory test again. 2017, I believe.

11          Q.     Now, in terms of the wellhead treatment, have you  
12     ever -- has that been installed at any other wells of plaintiff  
13     during your time working with Whittaker?

14          A.     Well, wellhead treatment was installed at Q-2,

02:24PM

15     Well Q-2, which is an alluvial well. And that ran for a fairly  
16     short time before that -- it cleaned up very quickly.

17                 And in terms of just wellhead treatment, I know that  
18     they recently installed treatment vessels near the end wells.

19     I'm not sure that that would be the same as wellhead treatment.

02:24PM

20     I don't know much about that project.

21          Q.     And going back to this kind of linear pathway, you  
22     said site S-2, S-1, V-201, what's the next well in the path, if  
23     you will, for the site?

24          A.     201 and 205.

02:24PM

25          Q.     And so going back to my initial question that

1 started us down this road, do you recall when you -- when  
2 Whittaker may have received notice of perchlorate detections in  
3 205 above the MCL?

02:24PM

4 A. Well, there was -- there was a written notification  
5 from the agency to Whittaker.

6 Q. Do you recall generally when that took place?

7 A. 2018-ish, around that -- around that time frame.

02:25PM

8 But we were aware -- I mean, again, it's a topic of discussion  
9 we have with our fellow engineers working for the agency, what  
10 was going on with other wells.

11 Q. And when you say you were aware, were you aware  
12 specifically of issues related to 205 or --

13 A. Yes. Correct.

02:25PM

14 Q. And what do you mean to be aware and your having  
15 discussions about -- in what sense with these technical folks?

16 A. We -- we were told that there were detections.

17 Q. Prior to the 2018 notice?

18 A. Yes.

19 Q. Okay.

02:25PM

20 A. I mean, just -- not too far. I don't know exactly  
21 when. But, you know, they routinely -- as a responsible  
22 agency, routinely are monitoring these wells. And -- and  
23 they're pretty forthcoming with the information and what they  
24 find. And we were notified that there were detections of  
02:25PM 25 perchlorate in 205.

1 Q. And after receiving notification, what was your  
2 part, if any, in responding to this notification?

3 A. Well, the first thing we do is, you know, trying to  
4 be scientists. Okay. Is it real? Is it repeatable? And we'd  
02:26PM 5 ask questions: Was the well pumping at the time? Was it  
6 static at the time? We wanted to know the condition under  
7 which the sample was collected so we'd understand what was --  
8 what it meant.

9 Q. Okay. And what did that process -- take a step  
02:26PM 10 back.

11 Did you have these discussions with the technical  
12 folks and the water agency?

13 A. We did.

14 Q. What was the nature of those discussions with the  
02:26PM 15 water agency after receiving notice?

16 A. Well -- okay. For 205, the -- the reason that we  
17 were very anxious and we wanted to get 201 up and operating --  
18 again, 201 is upgradient. We wanted that well to get up and  
19 operating and pumping as soon as possible because we wanted the  
02:26PM 20 containment value of that so that it would protect 205.

21 Q. So to understand -- and make sure I understand  
22 clearly -- the nature of the SPTF and eventually 201 is to  
23 contain the perchlorate plume. Is that accurate?

24 A. Well, it's also to provide water supply.

02:27PM 25 Q. Okay. So in your conversations with the agency in



1 these technical meetings, what was the nature of the  
2 discussion? How was -- how were we going to address the V-205  
3 perchlorate contamination?

02:27PM 4 A. Well, there was discussion as to whether 201 would  
5 be adequate to contain the plume and whether wellhead treatment  
6 at 205 was, indeed, necessary.

7 Q. And was there anything done to try and assess  
8 whether or not 201 would provide adequate containment?

02:27PM 9 A. There was. There -- there -- we shared information  
10 with consultants for the agency regarding water levels. We  
11 maintain a very large database of water level information, and  
12 we shared that information. And we were aware that  
13 Daniel Craig of Todd Groundwater, one of their consultants, was  
14 doing a -- sort of a global assessment of containment to --

02:28PM 15 Q. And why is that important? What's this global  
16 assessment -- what are you hoping to learn from it?

17 A. Whether the strategy of using Saugus 1 and 2, the --  
18 the site perimeter containment, Saugus 1 and 2 wells and V-201  
19 would be adequate to contain future perchlorate migration.

02:28PM 20 Q. And was this a discussion that you had with the  
21 agency directly or technical folks for the agency? Can you  
22 elaborate?

23 A. Well, we were working together. We provided the  
24 information. I believe at that time, it was a collaborative  
02:28PM 25 effort. We were, you know, hydrogeologists working together to

1 try to understand and study this problem and evaluate whether  
2 the strategy is sufficient to prevent future downgradient  
3 impacts.

02:29PM 4 Q. And did you have any discussions with Mr. Lardiere  
5 about this -- these discussions you were having and this --  
6 this plan of evaluating the effectiveness of the SPTF in 201  
7 containment?

02:29PM 8 A. I did. And in response to the letter that we  
9 received from the agency I was copied on, it was directed to  
10 Mr. Lardiere, we talked and we -- we told him that we're really  
11 waiting to see what the results of this containment evaluation  
12 was going to show, whether we really needed to put wellhead  
13 treatment for 205 or whether, you know, continued pumping at  
14 201 would be adequate to protect 205.

02:29PM 15 THE COURT: Can you just -- so that it's clear, when  
16 you refer to "wellhead treatment," could you make clear what  
17 you're referring to?

18 THE WITNESS: Yes, sir.

02:29PM 19 So again, the wellhead treatment would be the  
20 vessels we installed at V-201 that began pumping around that  
21 time and that provides hydraulic containment. And hopefully  
22 the spread -- the perchlorate plume wouldn't spread any  
23 further.

02:30PM 24 Q. (BY MR. GALLAGHER:) You had these discussions, you  
25 spoke with Mr. Lardiere about this -- can we call it a

1 wait-and-see approach? Is that fair?

2 A. That's a fair assessment.

3 Q. Okay. And we're waiting and seeing. And are you  
4 waiting for additional information, I believe you said?

02:30PM

5 A. Right. So we -- we worked, I believe,  
6 collaboratively with Todd Groundwater to come up with -- you  
7 know, to provide them the information -- excuse me -- them the  
8 information they needed to do the assessment of whether we had  
9 adequate containment. And we were waiting for this containment  
10 report and --

02:30PM

11 Q. And did you ever receive this containment report?

12 A. Not until after this lawsuit was filed.

13 Q. Did you ever have a discussion with Mr. Lardiere of,  
14 you know, should we just do perchlorate treatment? Should we  
15 just install wellhead treatment at 205?

02:30PM

16 A. Well, we had given -- we had been given him costs  
17 for what it would take to put treatment on -- wellhead  
18 treatment at 205. We do that as part of our yearly projections  
19 to him so he knows what's coming. We didn't say it wasn't  
20 needed. We didn't say it was absolutely needed. We informed  
21 him as to the -- the fact that the technical folks were looking  
22 at this trying to see if our strategy was adequate to protect  
23 205 or not.

02:31PM

24 Q. In your conversations with Mr. Lardiere, did he ever  
25 say, um, you know, he wouldn't pay for the perchlorate

02:31PM

1 treatment at 205?

2 MR. RICHARD: Objection, Your Honor. This one calls  
3 for hearsay.

4 THE COURT: Sustained.

02:31PM 5 Q. (BY MR. GALLAGHER:) Do you have an understanding of  
6 whether or not Whittaker was delaying in -- unnecessarily in  
7 paying for any treatment of V-205?

8 A. Absolutely not. He -- if we told Mr. Lardiere that  
9 he should install wellhead treatment, he would have put  
02:31PM 10 wellhead treatment in. He would have paid for it.

11 Q. Okay. So is it my understanding, then, that it was  
12 the technical folks like yourself recommending this  
13 wait-and-see approach?

14 A. That's correct.

02:32PM 15 Q. Stepping back for a minute and focusing now on  
16 V-201. I know you've been a part of many conversations about  
17 the status of the DDW permitting process as it relates to 201.  
18 Is that fair?

19 A. That's fair, yes.

02:32PM 20 Q. Can you describe how you've been involved in the 201  
21 and the DDW permitting process?

22 A. Well, it's -- it's an ongoing topic of discussion.  
23 And I remember when we first finished the perimeter containment  
24 program that -- the wells that were installed, we -- we had a  
02:32PM 25 friendly bet as to who was going to get the permit first to

1 operate the well.

2 At the same time we were doing the perimeter  
3 containment, the V-201 was being constructed and started to  
4 get -- started the permit process. And we really thought that  
02:33PM 5 a permit was about to happen for -- for both the -- the  
6 perimeter containment at the site, which was managed by my  
7 colleague, Dr. Amini, and V -- V-201. And we got the permit  
8 very quickly for -- for the perimeter containment, and we have  
9 yet to get a permit for 201.

02:33PM 10 Q. And have you had any involvement in the actual  
11 drafting of the permit documentation, et cetera?

12 A. No.

13 Q. Well, taking a -- taking a step back, what's  
14 involved in this permit process, if you know?

02:33PM 15 A. Well, it's -- it's -- there's a technical report  
16 that's required and a source water assessment, and they're very  
17 involved -- I don't -- you know, it's a -- it's a laborious  
18 process to -- to obtain this permit because it's considered a  
19 highly impaired source of water.

02:33PM 20 Q. Okay. And that involves this policy by the DDW, as  
21 what you refer to it, 97-005?

22 A. That's correct.

23 Q. And do you have an understanding of -- or been  
24 involved in this process in complying with 97-005 policy  
02:34PM 25 requirements, et cetera?

1 A. I don't understand the question. I'm sorry.

2 Q. Well, how are you involved, if at all, in this  
3 permitting process?

02:34PM 4 A. We just learned about what's happening. We don't --  
5 we're not directly involved. I would say Whittaker funds it,  
6 but we're not -- we don't have really a seat at the table  
7 between the discussions, between DDW and the water agency.

8 THE COURT: We're going to break now. Is this an  
9 okay stopping point?

02:34PM 10 MR. GALLAGHER: Yes.

11 THE COURT: All right. So, ladies and gentlemen, we  
12 will conclude for the day. I'm going to have you back tomorrow  
13 at 8:30, ordinary time.

02:34PM 14 Please remember, don't speak to anyone about the  
15 case, the people, or the subject matter involved. Continue to  
16 keep an open mind.

17 We'll see you tomorrow at 8:30.

18 THE COURTROOM DEPUTY: All rise for the jury,  
19 please.

02:34PM 20 (Out of the presence of the jury:)

21 THE COURT: And you may step down, sir. Thank you.

22 We remain on the record -- please be seated. We  
23 remain on the record outside the presence of the jury.

02:35PM 24 And let me just get some further time estimates for  
25 the -- your remaining case, beginning with the witness who's

1 currently on the witness stand.

2 MR. BLUM: Your Honor, we have -- we believe our  
3 part for Mr. Simpson will take another -- an additional  
4 45 minutes.

02:35PM 5 THE COURT: All right.

6 MR. BLUM: And I can't speak for the plaintiff.

7 THE COURT: Do you have a time estimate for  
8 cross-examination, Mr. Richard?

9 MR. RICHARD: Well, I haven't heard all of it, but  
02:35PM 10 probably 45 minutes.

11 THE COURT: Has he been deposed?

12 MR. RICHARD: He has been deposed.

13 THE COURT: All right. And then the rest is  
14 comprised of the video depositions.

02:36PM 15 MR. BLUM: There will be one additional live  
16 witness. That would be B.J. Lechler who's under subpoena and  
17 will be here at 8:30 tomorrow morning.

18 THE COURT: And was he the caveat that you were  
19 alluding to? Because I think you told me Tim Simpson, Simmons,  
02:36PM 20 Jisa, and Luce.

21 MR. BLUM: Yes. We were -- Your Honor, we had five  
22 potential witnesses that we could have called. We will be  
23 resting tomorrow.

24 THE COURT: I'm not pushing back on you.

02:36PM 25 MR. BLUM: Oh, no, and I --

1 THE COURT: I'm just asking.

2 MR. BLUM: Yes, sir. He was the one we decided we  
3 should call, and we're not going to call the rest.

4 THE COURT: That's all I was asking. All right.

02:36PM

5 MR. BLUM: Yes, sir.

6 THE COURT: And what is your time estimate for  
7 Mr. Lechler? And then tell me about the witnesses who will be  
8 presented by video.

02:37PM

9 MR. BLUM: Well, the only witness by video is going  
10 to be Ms. Durant. The other ones, there will be no video. It  
11 will have to be read in.

12 THE COURT: I see.

02:37PM

13 MR. BLUM: And Mr. Lechler -- I don't think it will  
14 go more than an hour for direct. And just so you know, he's a  
15 non-retained expert.

16 THE COURT: And when you say "non-retained expert,"  
17 that means he wasn't designated as an expert.

18 MR. BLUM: He was designated specifically as a  
19 non-retained expert.

02:37PM

20 THE COURT: Is that true for Ms. Durant?

21 MR. BLUM: It was in the rebuttal designation by  
22 plaintiff.

23 THE COURT: Is that correct, Mr. Richard?

02:37PM

24 MR. RICHARD: They were designated as professional  
25 witnesses who may offer technical testimony, Your Honor. So



1 out of an abundance of caution, we designate witnesses as  
2 potentially offering, you know, testimony in the nature of  
3 expert testimony.

02:37PM 4 THE COURT: All right. But returning to the -- the  
5 amount of time. So I'm trying to figure out how much time it's  
6 going to take us through the day.

7 So it appears to me we have two-and-a-half hours,  
8 and that's even before cross-examination, with B.J. Lechler.  
9 Do you have an approximation, Mr. Richard, on cross-examination  
02:38PM 10 for Mr. Lechler?

11 MR. RICHARD: Probably an hour. He wrote a lot.  
12 I'm not -- less than an hour.

13 THE COURT: All right. And so tell me -- this you  
14 could probably give me much more precise information. For each  
02:38PM 15 of the deponents who will testify, how much time do you  
16 anticipate for each one?

17 MR. BLUM: Well, Ms. Durant is timed at 50  
18 minutes -- that's the easy one -- for both sides. And we're --  
19 and we've agreed that we will play it in one -- one like we did  
02:38PM 20 with Mr. Peloquin.

21 THE COURT: All right.

22 MR. BLUM: The other -- the three of them, I  
23 anticipate -- we still have not got it down solid, but it's  
24 about 20 minutes each. We really are limiting what we're going  
02:38PM 25 to read in.

1 THE COURT: So you're anticipating another hour for  
2 all of the remaining witnesses who will be appearing by  
3 deposition?

4 MR. BLUM: Yes, sir. And that's for both sides.

02:39PM

5 THE COURT: All right. I'm going to have to take  
6 another look. I'll want to hear from you, Mr. Richard. So if  
7 you would take the lectern.

02:39PM

8 I'm going to need to take another look at the  
9 objections for Ms. Durant. I was prepared to rule, but I was  
10 basing my ruling on her not being designated as an expert. And  
11 it appears to me that you have a number of objections, which  
12 likely my ruling will turn on, that are based upon improper  
13 opinion by a non-designated expert.

14 So if she's been designated, what's the objection?

02:39PM

15 MR. RICHARD: She's not a retained -- or she's  
16 designated, I think, under 701 or 702 as someone who may  
17 give -- I think we designated some of the defendants as  
18 potential witnesses who may offer testimony in the nature of  
19 expert testimony, meaning beyond the jury's comprehension.

02:40PM

20 So, you know, I'll have to check her designation,  
21 but that was certainly the intent. These are people who  
22 have -- may be using technical terms. She's not a retained  
23 expert. She doesn't speak for the company or the  
24 corporation --

02:40PM

25 THE COURT: So --

1 MR. RICHARD: -- the agency.

2 THE COURT: -- however you ultimately implemented  
3 whatever you were intending to do, you're telling the Court the  
4 intent was simply to signify that she was a person, albeit a  
02:40PM 5 percipient witness, who had expert knowledge?

6 MR. RICHARD: Yes, Your Honor.

7 THE COURT: But not that she would be offering  
8 expert opinions?

9 And let me draw the distinction for you that I have  
02:40PM 10 in mind. So you have a treating physician. And the treating  
11 physician gives opinions based upon what the diagnosis was,  
12 what the prognosis was, but then doesn't necessarily offer  
13 opinions outside of what the treating physician did within the  
14 course and scope of his or her work.

02:41PM 15 And so is that what you did here? Because as I see  
16 it, there are opinions that are offered that would fit the  
17 category of a designated expert, not just someone who happens  
18 to have expertise, but they're being asked opinions apart from  
19 what they previously had worked upon.

02:41PM 20 MR. RICHARD: So the short answer, Your Honor, is  
21 when percipient witnesses like the physician -- and that's the  
22 classic example -- I believe we're required to disclose those,  
23 as we would with a treating physician, as someone who may be  
24 offering testimony in the nature of an expert opinion.

02:41PM 25 And for physicians, they can talk about what they

1 did at the time. They can't offer opinions going forward  
2 typically or something that they didn't do at the time.

3 So she definitely falls in that category. If she  
4 had -- if she expressed an opinion to the agency at the time, I  
02:42PM 5 think that's fair game. But to be asked all sorts of questions  
6 during her deposition beyond what she actually did as a  
7 percipient witness, I think that's where the mischief begins.

8 THE COURT: All right. And, Mr. Blum, let me hear a  
9 response, please.

02:42PM 10 MR. BLUM: Your Honor, I know no basis in the FRCP  
11 to make that distinction.

12 They named her as a non-retained expert. There is  
13 no doubt about that. She's non-retained because neither side  
14 hired her, but they admit she's an expert. They referred to  
02:42PM 15 her as a non-retained expert. They say she's going to give  
16 opinions as a non-retained expert. And now they want to limit  
17 what those opinions are. I understand why, but that's not  
18 allowed.

19 THE COURT: All right. Well, for what it's worth, I  
02:42PM 20 don't know that what the parties are fighting over is quite  
21 that momentous.

22 But do you have anything further that you wish to  
23 add to this legal point?

24 MR. BLUM: Well, Your Honor, what -- the sentence  
02:43PM 25 where they -- that they say is the qualifying sentence in

1 their -- in their rebuttal designation, they said that they  
2 reserve the right to call non-retained experts or individuals  
3 who have personal knowledge and with appropriate knowledge,  
4 skill, training, expertise, or education, which is an expert,  
02:43PM 5 to offer rebuttal testimony. That's a non-retained expert.

6 THE COURT: And when you deposed Ms. Durant, did you  
7 ask her whether she intended to offer rebuttal opinions and  
8 what those opinions were?

9 MR. BLUM: No, because she -- as a non-retained  
02:43PM 10 expert, the rules are different, Your Honor. There's no report  
11 or anything like that.

12 THE COURT: I understand that. But I assume -- I  
13 assume as a lawyer who is being told that a witness may offer  
14 rebuttal opinions, that you'd want to know what those are.

02:43PM 15 MR. BLUM: I think I asked her what her opinions  
16 were, but I didn't go through what you normally go through with  
17 a retained expert.

18 THE COURT: All right. I'll take a look at the  
19 objections with this conversation in mind, now that I better  
02:44PM 20 understand at least what the factual record apparently is.

21 Other than that, the Court is going to adjourn for  
22 the day.

23 The parties should be prepared to address some jury  
24 instruction issues by tomorrow at 8:00 o'clock. I do have a  
02:44PM 25 sentencing at 7:30 tomorrow, but I do expect to be done by 8:00

1 or thereabouts.

2 And then we'll continue the discussion on the jury  
3 instructions at the end of the day after the -- the evidence  
4 has concluded.

02:44PM

5 Mr. Richard, do you anticipate at this point  
6 presenting a rebuttal case?

7 MR. RICHARD: We are evaluating whether to call one  
8 live witness, and then there is a 30(b)(6) deposition that  
9 we'll evaluate whether I use that. And we'll have an answer  
10 for the Court at 8:00 a.m. tomorrow, if that's okay.

02:45PM

11 THE COURT: That's fine.

12 But do you also agree, Mr. Richard, that, based upon  
13 what you've heard and which you know, that you believe we will  
14 get done with the evidence tomorrow?

02:45PM

15 MR. RICHARD: Yes, Your Honor.

16 THE COURT: All right. Then unless there's anything  
17 further, I will see the parties back tomorrow at 8:00 o'clock.

18 Is there anything further, Mr. Richard, for the  
19 plaintiff?

02:45PM

20 MR. RICHARD: If there was, it slipped out of my  
21 mind.

22 THE COURT: Mr. Blum, I see you rising.

23 MR. BLUM: It's just a question. Do I -- we'll be  
24 doing closings on Thursday, then?

02:45PM

25 THE COURT: Yes. You do not have to anticipate

1 closing tomorrow.

2 MR. BLUM: Okay.

3 THE COURT: All right. We're in recess.

4 (Proceedings adjourned at 2:45 p.m.)

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**CERTIFICATE OF OFFICIAL REPORTER**

COUNTY OF LOS ANGELES )  
STATE OF CALIFORNIA )

I, MYRA L. PONCE, FEDERAL OFFICIAL REALTIME COURT REPORTER, IN AND FOR THE UNITED STATES DISTRICT COURT FOR THE CENTRAL DISTRICT OF CALIFORNIA, DO HEREBY CERTIFY THAT PURSUANT TO SECTION 753, TITLE 28, UNITED STATES CODE THAT THE FOREGOING IS A TRUE AND CORRECT TRANSCRIPT OF THE STENOGRAPHICALLY REPORTED PROCEEDINGS HELD IN THE ABOVE-ENTITLED MATTER AND THAT THE TRANSCRIPT PAGE FORMAT IS IN CONFORMANCE WITH THE REGULATIONS OF THE JUDICIAL CONFERENCE OF THE UNITED STATES.

DATED THIS 1ST DAY OF DECEMBER, 2021.

/S/ MYRA L. PONCE

MYRA L. PONCE, CSR NO. 11544, CRR, RDR  
FEDERAL OFFICIAL COURT REPORTER





1744:19 <b>ALLUVIAL</b> [8] - 1696:18, 1696:19, 1697:10, 1697:16, 1697:19, 1717:5, 1717:8, 1735:15 <b>ALLUVIUM</b> [1] - 1697:19 <b>AMINI</b> [2] - 1732:5, 1742:7 <b>AMOUNT</b> [5] - 1714:7, 1714:14, 1718:12, 1734:18, 1746:5 <b>ANALYSIS</b> [3] - 1695:11, 1725:23, 1726:1 <b>ANALYZE</b> [2] - 1714:6 <b>AND</b> [1] - 1729:8 <b>ANGELES</b> [1] - 1678:2 <b>ANION</b> [1] - 1734:10 <b>ANSWER</b> [6] - 1681:8, 1691:7, 1720:14, 1722:23, 1748:20, 1751:9 <b>ANSWERED</b> [1] - 1710:12 <b>ANTICIPATE</b> [4] - 1746:16, 1746:23, 1751:5, 1751:25 <b>ANTICIPATING</b> [1] - 1747:1 <b>ANXIOUS</b> [1] - 1737:17 <b>APART</b> [1] - 1748:18 <b>APOLOGIES</b> [1] - 1702:22 <b>APOLOGIZE</b> [1] - 1686:14 <b>APPEARING</b> [1] - 1747:2 <b>APPLY</b> [1] - 1720:21 <b>APPROACH</b> [2] - 1740:1, 1741:13 <b>APPROPRIATE</b> [1] - 1750:3 <b>APPROXIMATE</b> [1] - 1688:24 <b>APPROXIMATION</b> [1] - 1746:9 <b>AQUIFER</b> [8] - 1696:20, 1697:10, 1697:16, 1714:8, 1714:16, 1717:5, 1717:9, 1723:13 <b>AQUIFERS</b> [2] - 1710:3, 1712:18 <b>AREA</b> [31] - 1687:4, 1687:19, 1687:22, 1688:9, 1689:14, 1689:25, 1690:7,	1690:12, 1690:13, 1693:23, 1695:5, 1695:6, 1695:7, 1695:21, 1696:6, 1697:5, 1698:23, 1706:19, 1707:21, 1708:5, 1708:12, 1708:20, 1708:23, 1709:4, 1709:6, 1710:5, 1710:6, 1710:9, 1720:10, 1722:4, 1727:3 <b>AREAS</b> [12] - 1701:6, 1701:10, 1701:16, 1701:19, 1701:21, 1703:6, 1704:18, 1709:8, 1710:13, 1710:25, 1711:21, 1727:19 <b>ARGUED</b> [1] - 1728:5 <b>ARGUMENTATIVE</b> [1] - 1726:4 <b>ARMY</b> [1] - 1695:12 <b>AROSE</b> [1] - 1732:21 <b>ARROW</b> [3] - 1708:17, 1708:18, 1708:19 <b>AS</b> [2] - 1678:14, 1729:8 <b>ASSESS</b> [1] - 1738:7 <b>ASSESSMENT</b> [5] - 1738:14, 1738:16, 1740:2, 1740:8, 1742:16 <b>ASSOCIATES</b> [1] - 1696:5 <b>ASSUME</b> [2] - 1750:12, 1750:13 <b>ASSUMES</b> [1] - 1697:10 <b>ATTACHED</b> [6] - 1688:16, 1689:1, 1689:9, 1690:16, 1699:2, 1710:14 <b>ATTORNEY</b> [1] - 1726:1 <b>ATTRIBUTABLE</b> [1] - 1694:8 <b>ATTRIBUTING</b> [1] - 1707:16 <b>AUTHOR</b> [1] - 1713:7 <b>AVAILABLE</b> [1] - 1682:12 <b>AVERAGE</b> [1] - 1726:18 <b>AWARE</b> [8] - 1692:18, 1696:4, 1732:6, 1736:8, 1736:11, 1736:14, 1738:12	<b>B</b>  <b>B.J</b> [3] - 1713:4, 1744:16, 1746:8 <b>BACHELOR'S</b> [1] - 1729:20 <b>BACKGROUND</b> [1] - 1729:18 <b>BAD</b> [1] - 1688:14 <b>BASED</b> [10] - 1681:9, 1682:10, 1682:12, 1695:21, 1707:20, 1707:21, 1710:2, 1747:12, 1748:11, 1751:12 <b>BASIC</b> [1] - 1704:7 <b>BASING</b> [1] - 1747:10 <b>BASIS</b> [1] - 1749:10 <b>BECOME</b> [1] - 1733:22 <b>BEGAN</b> [1] - 1739:20 <b>BEGINNING</b> [2] - 1699:21, 1743:25 <b>BEGINS</b> [1] - 1749:7 <b>BEHALF</b> [3] - 1721:3, 1721:6, 1730:20 <b>BEHIND</b> [1] - 1734:11 <b>BELOW</b> [1] - 1717:4 <b>BENEATH</b> [7] - 1680:1, 1680:11, 1683:3, 1708:25, 1711:9, 1711:15, 1711:23 <b>BERMITE</b> [23] - 1683:8, 1683:16, 1689:18, 1691:5, 1692:17, 1700:8, 1701:4, 1701:11, 1701:14, 1702:3, 1702:5, 1702:8, 1702:12, 1702:25, 1708:2, 1709:8, 1709:15, 1713:16, 1713:18, 1717:21, 1730:3, 1730:20, 1731:3 <b>BET</b> [1] - 1741:25 <b>BETTER</b> [1] - 1750:19 <b>BETWEEN</b> [11] - 1685:1, 1687:11, 1690:15, 1691:21, 1718:10, 1718:20, 1723:1, 1730:8, 1734:17, 1743:7 <b>BEYOND</b> [3] - 1727:18, 1747:19, 1749:6 <b>BIG</b> [3] - 1709:12, 1709:23, 1712:5 <b>BIGGER</b> [1] - 1702:12	<b>BILLION</b> [3] - 1687:12, 1715:12, 1715:16 <b>BIT</b> [4] - 1708:22, 1718:18, 1729:18, 1732:11 <b>BLACK</b> [1] - 1704:17 <b>BLENDED</b> [1] - 1734:22 <b>BLOB</b> [2] - 1709:13, 1709:24 <b>BLUE</b> [1] - 1690:2 <b>BLUM</b> [31] - 1679:9, 1692:24, 1712:25, 1713:2, 1716:20, 1719:14, 1720:2, 1726:4, 1726:23, 1727:2, 1727:20, 1744:2, 1744:6, 1744:15, 1744:21, 1744:25, 1745:2, 1745:5, 1745:9, 1745:13, 1745:18, 1745:21, 1746:17, 1746:22, 1747:4, 1749:10, 1749:24, 1750:9, 1750:15, 1751:23, 1752:2 <b>BLUM</b> [5] - 1680:6, 1712:24, 1716:19, 1749:8, 1751:22 <b>BOARD</b> [1] - 1731:8 <b>BOUNDARY</b> [3] - 1715:7, 1721:18, 1723:7 <b>BOWL</b> [4] - 1687:16, 1687:18, 1687:20, 1687:21 <b>BREAK</b> [2] - 1678:6, 1743:8 <b>BRIEFLY</b> [1] - 1707:9 <b>BUILD</b> [1] - 1692:6 <b>BUSINESSES</b> [1] - 1729:17 <b>BY</b> [27] - 1678:16, 1679:12, 1685:8, 1686:7, 1686:17, 1688:13, 1688:15, 1689:23, 1690:1, 1693:1, 1694:21, 1699:24, 1705:4, 1706:12, 1708:17, 1713:2, 1716:20, 1719:14, 1720:6, 1721:13, 1726:6, 1727:2, 1727:24, 1729:10, 1730:18, 1739:24, 1741:5	<b>C</b>  <b>CALCULATE</b> [1] - 1726:11 <b>CALCULATED</b> [1] - 1726:12 <b>CALIFORNIA</b> [1] - 1678:2 <b>CALIFORNIA</b> [4] - 1729:17, 1729:23, 1729:25, 1730:1 <b>CAPACITY</b> [1] - 1730:19 <b>CAPTURE</b> [8] - 1697:23, 1697:25, 1698:2, 1698:11, 1698:15, 1698:23, 1699:6, 1699:12 <b>CAREER</b> [1] - 1713:24 <b>CAREFUL</b> [1] - 1723:23 <b>CAREFULLY</b> [2] - 1725:17, 1726:7 <b>CASE</b> [17] - 1678:18, 1678:25, 1680:15, 1682:3, 1691:4, 1692:20, 1696:15, 1703:10, 1710:23, 1712:3, 1712:18, 1719:22, 1726:12, 1726:15, 1743:15, 1743:25, 1751:6 <b>CASES</b> [3] - 1679:2, 1701:22, 1701:24 <b>CASTAIC</b> [1] - 1730:9 <b>CATEGORY</b> [2] - 1748:17, 1749:3 <b>CAUTION</b> [1] - 1746:1 <b>CAVEAT</b> [1] - 1744:18 <b>CDM</b> [5] - 1702:18, 1703:3, 1703:8, 1703:10, 1703:17 <b>CENTRAL</b> [1] - 1687:7 <b>CERTAIN</b> [7] - 1690:9, 1693:7, 1695:17, 1698:23, 1714:7, 1714:10, 1714:14 <b>CERTAINLY</b> [2] - 1684:24, 1747:21 <b>CERTAINTY</b> [2] - 1680:20, 1680:24 <b>CETERA</b> [5] - 1684:13, 1724:13, 1742:11, 1742:25 <b>CH2M</b> [10] - 1689:3, 1690:4, 1690:20, 1694:18, 1695:5, 1695:11, 1699:25, 1710:14, 1713:8, 1717:16
--	---	--	--	---

<b>CHECK</b> [2] - 1697:18, 1747:20	<b>COLLABORATIVE</b> [1] - 1738:24	1714:11, 1715:2, 1715:6, 1715:9, 1715:11, 1715:19, 1715:23, 1715:25, 1720:22, 1721:25, 1722:1	1698:23, 1724:1, 1737:23, 1738:5, 1738:19	1692:10, 1692:11, 1692:14, 1693:21, 1694:13, 1696:15, 1698:20, 1700:11, 1701:12, 1701:15, 1705:7, 1705:15, 1705:24, 1706:24, 1707:25, 1710:3, 1711:23, 1712:14, 1715:13, 1715:14, 1717:20, 1719:11, 1720:22, 1721:16, 1721:23, 1722:1, 1722:13, 1722:19, 1722:20, 1722:22, 1723:12, 1723:18, 1723:22, 1724:22, 1724:24, 1726:8, 1726:13, 1728:4, 1731:11, 1732:4, 1736:13, 1741:14, 1742:22, 1745:23
<b>CHEMICAL</b> [4] - 1679:19, 1679:23, 1680:12, 1682:23	<b>COLLABORATIVELY</b> [1] - 1740:6		<b>CONTAINING</b> [1] - 1733:8	<b>CORRECTLY</b> [3] - 1685:10, 1686:25, 1699:9
<b>CHEMICALS</b> [7] - 1679:17, 1679:25, 1680:15, 1681:15, 1712:8, 1718:13, 1724:15	<b>COLLEAGUE</b> [2] - 1732:5, 1742:7		<b>CONTAINMENT</b> [19] - 1698:19, 1698:22, 1724:20, 1725:2, 1732:13, 1737:20, 1738:8, 1738:14, 1738:18, 1739:7, 1739:11, 1739:21, 1740:9, 1740:11, 1741:23, 1742:3, 1742:6, 1742:8	<b>CORRESPONDENCE</b> [3] - 1703:15, 1703:16
<b>CHLORIDE</b> [5] - 1679:19, 1680:10, 1681:7, 1681:15, 1681:18	<b>COLLEAGUES</b> [1] - 1731:7	<b>CONCEPT</b> [1] - 1715:21	<b>CONTAMINANTS</b> [11] - 1679:13, 1683:3, 1683:5, 1693:8, 1693:15, 1709:6, 1712:2, 1726:8, 1726:19, 1727:25, 1728:3	<b>COSTS</b> [1] - 1740:16
<b>CHLORINATED</b> [1] - 1718:13	<b>COLLECTED</b> [1] - 1737:7	<b>CONCEPTUAL</b> [4] - 1695:21, 1695:22, 1695:23, 1695:24	<b>CONTAMINATION</b> [8] - 1680:7, 1702:24, 1708:2, 1711:9, 1711:15, 1711:18, 1732:4, 1738:3	<b>COUNSEL</b> [1] - 1678:7
<b>CHLOROFORM</b> [8] - 1681:11, 1681:18, 1686:8, 1686:14, 1686:24, 1688:1, 1688:2	<b>COLLECTING</b> [1] - 1706:22	<b>CONCEPTUALLY</b> [2] - 1725:5, 1725:9	<b>CONTINUE</b> [8] - 1678:10, 1683:22, 1704:1, 1704:6, 1728:7, 1730:19, 1743:15, 1751:2	<b>COUPLE</b> [5] - 1679:17, 1706:13, 1717:10, 1720:3, 1731:7
<b>CIRCLED</b> [1] - 1687:25	<b>COLORED</b> [3] - 1722:20, 1722:21	<b>CONCLUDE</b> [4] - 1681:5, 1713:15, 1713:17, 1743:12	<b>CONTINUED</b> [1] - 1739:13	<b>COURSE</b> [1] - 1748:14
<b>CITE</b> [1] - 1689:5	<b>COMFORTABLE</b> [1] - 1708:24	<b>CONCLUDED</b> [1] - 1751:4	<b>CONTOUR</b> [1] - 1710:18	<b>COURT</b> [4] - 1728:22, 1748:3, 1750:21, 1751:10
<b>CIVIL</b> [3] - 1729:20, 1729:22, 1729:25	<b>COMING</b> [4] - 1719:25, 1720:1, 1731:3, 1740:19	<b>CONCLUDES</b> [1] - 1702:2	<b>CONTOURS</b> [1] - 1691:2	<b>COURT</b> [62] - 1678:5, 1678:10, 1679:10, 1683:22, 1684:1, 1684:7, 1684:11, 1684:18, 1684:24, 1685:5, 1686:2, 1692:25, 1705:1, 1705:19, 1705:25, 1706:10, 1712:24, 1716:17, 1719:13, 1720:4, 1726:5, 1727:22, 1728:11, 1728:14, 1729:5, 1730:17, 1739:15, 1741:4, 1743:8, 1743:11, 1743:21, 1744:5, 1744:7, 1744:11, 1744:13, 1744:18, 1744:24, 1745:1, 1745:4, 1745:6, 1745:12,
<b>CLARIFY</b> [1] - 1722:23	<b>COMPANY</b> [2] - 1696:5, 1747:23	<b>CONCLUSION</b> [8] - 1693:11, 1700:11, 1707:22, 1707:23, 1711:5, 1711:20, 1721:9, 1725:18	<b>CONTROL</b> [2] - 1731:8	
<b>CLASSIC</b> [1] - 1748:22	<b>COMPARABLE</b> [1] - 1716:24	<b>CONCLUSIONS</b> [7] - 1700:5, 1707:25, 1713:13, 1723:24, 1724:6, 1725:11, 1726:19	<b>CONVERSATION</b> [1] - 1750:19	
<b>CLEANED</b> [1] - 1735:16	<b>COMPARE</b> [1] - 1715:5	<b>CONDITION</b> [1] - 1737:6	<b>CONVERSATIONS</b> [3] - 1737:25, 1740:24, 1741:16	
<b>CLEANUP</b> [1] - 1685:20	<b>COMPARED</b> [5] - 1692:12, 1692:16, 1694:1, 1694:13, 1721:5	<b>CONDITIONS</b> [2] - 1717:11, 1728:3	<b>CONVEY</b> [1] - 1734:21	
<b>CLEAR</b> [2] - 1739:15, 1739:16	<b>COMPARING</b> [7] - 1693:23, 1720:23, 1721:1, 1723:16, 1725:11, 1726:2, 1734:12	<b>CONNECTED</b> [9] - 1689:18, 1696:19, 1697:6, 1697:8, 1697:13, 1697:14, 1697:16, 1712:19, 1717:5	<b>COPIED</b> [1] - 1739:9	
<b>CLEARLY</b> [1] - 1737:22	<b>COMPLETE</b> [1] - 1734:19	<b>CONNECTING</b> [1] - 1691:18	<b>CORPORATION</b> [1] - 1747:24	
<b>CLIENTS</b> [1] - 1729:14	<b>COMPLETELY</b> [2] - 1710:4, 1711:10	<b>CONNECTION</b> [1] - 1698:21	<b>CORPS</b> [1] - 1695:12	
<b>CLOSE</b> [1] - 1706:7	<b>COMPLIANCE</b> [1] - 1729:16	<b>CONSIDER</b> [1] - 1682:22	<b>CORRECT</b> [62] - 1678:22, 1679:3, 1679:8, 1680:4, 1680:13, 1680:14, 1681:20, 1682:3, 1682:15, 1683:17, 1683:24, 1685:16, 1686:9, 1686:12, 1689:2, 1689:6, 1689:7, 1690:3,	
<b>CLOSELY</b> [1] - 1718:24	<b>COMPLYING</b> [1] - 1742:24	<b>CONSIDERATION</b> [1] - 1681:7		
<b>CLOSER</b> [1] - 1733:12	<b>COMPOSITION</b> [1] - 1710:3	<b>CONSIDERED</b> [1] - 1742:18		
<b>CLOSEST</b> [3] - 1733:3, 1733:7, 1733:13	<b>COMPREHENSION</b> [1] - 1747:19	<b>CONSTRUCT</b> [1] - 1705:17		
<b>CLOSING</b> [1] - 1752:1	<b>COMPRISED</b> [1] - 1744:14	<b>CONSTRUCTED</b> [1] - 1742:3		
<b>CLOSINGS</b> [1] - 1751:24	<b>CONCENTRATE</b> [1] - 1715:1	<b>CONSULTANT</b> [2] - 1682:14, 1729:12		
<b>CLUSTER</b> [2] - 1721:21, 1722:4	<b>CONCENTRATION</b> [10] - 1710:1, 1720:8, 1720:11, 1720:16, 1722:13, 1722:18, 1722:22, 1723:11, 1727:8, 1728:2	<b>CONSULTANTS</b> [4] - 1685:19, 1730:10, 1738:10, 1738:13		
<b>CLUSTERS</b> [1] - 1706:25	<b>CONCENTRATIONS</b> [17] - 1693:12, 1693:15, 1694:1, 1702:16, 1703:19,	<b>CONTAIN</b> [5] -		
<b>CO</b> [4] - 1700:23, 1701:10, 1701:24, 1702:1				
<b>CO-LOCATED</b> [1] - 1701:24				
<b>CO-LOCATION</b> [3] - 1700:23, 1701:10, 1702:1				

<p>1745:16, 1745:20, 1745:23, 1746:4, 1746:13, 1746:21, 1747:1, 1747:5, 1747:25, 1748:2, 1748:7, 1749:8, 1749:19, 1750:6, 1750:12, 1750:18, 1751:11, 1751:16, 1751:22, 1751:25, 1752:3</p> <p><b>COURTROOM</b> [4] - 1728:17, 1728:25, 1729:2, 1743:18</p> <p><b>COVER</b> [1] - 1694:20</p> <p><b>CRAIG</b> [1] - 1738:13</p> <p><b>CREATE</b> [1] - 1716:1</p> <p><b>CREATED</b> [2] - 1698:2, 1698:6</p> <p><b>CROSS</b> [4] - 1678:11, 1744:8, 1746:8, 1746:9</p> <p><b>CROSS</b> [1] - 1678:15</p> <p><b>CROSS- EXAMINATION</b> [4] - 1678:11, 1744:8, 1746:8, 1746:9</p> <p><b>CROSS- EXAMINATION</b> [1] - 1678:15</p> <p><b>CUSTOMERS</b> [1] - 1734:24</p> <p><b>CW</b> [2] - 1690:24, 1695:5</p> <p><b>CW-01</b> [1] - 1715:9</p> <p><b>CW-1</b> [1] - 1695:15</p> <p><b>CW-1A</b> [1] - 1695:10</p>	<p>1721:11, 1722:11, 1723:2, 1724:8, 1724:10, 1724:14, 1724:16, 1724:18, 1725:20</p> <p><b>DATABASE</b> [1] - 1738:11</p> <p><b>DATE</b> [1] - 1707:15</p> <p><b>DATES</b> [3] - 1684:23, 1704:23, 1707:5</p> <p><b>DAYS</b> [2] - 1716:12, 1716:14</p> <p><b>DCA</b> [7] - 1679:22, 1680:3, 1681:6, 1681:14, 1681:18, 1681:19, 1681:21</p> <p><b>DDW</b> [5] - 1731:9, 1741:17, 1741:21, 1742:20, 1743:7</p> <p><b>DEAL</b> [3] - 1729:14, 1729:17, 1731:3</p> <p><b>DEALT</b> [1] - 1689:10</p> <p><b>DECADES</b> [1] - 1718:14</p> <p><b>DECIDED</b> [1] - 1745:2</p> <p><b>DECLINED</b> [1] - 1692:22</p> <p><b>DECREASE</b> [2] - 1715:19, 1715:20</p> <p><b>DECREASES</b> [1] - 1727:17</p> <p><b>DEEPER</b> [1] - 1701:6</p> <p><b>DEFENDANT'S</b> [2] - 1678:14, 1729:8</p> <p><b>DEFENDANTS</b> [1] - 1747:17</p> <p><b>DEFIED</b> [1] - 1720:9</p> <p><b>DEFINITELY</b> [1] - 1749:3</p> <p><b>DEFINITION</b> [2] - 1698:7, 1709:5</p> <p><b>DEFY</b> [1] - 1720:9</p> <p><b>DEGREE</b> [3] - 1680:20, 1680:23, 1729:22</p> <p><b>DELAYED</b> [3] - 1697:14, 1717:6, 1717:13</p> <p><b>DELAYING</b> [1] - 1741:6</p> <p><b>DELINEATE</b> [1] - 1721:7</p> <p><b>DEMONSTRATIVE</b> [1] - 1686:14</p> <p><b>DENIED</b> [1] - 1683:19</p> <p><b>DEPARTMENT</b> [2] - 1731:7, 1731:9</p> <p><b>DEPICTS</b> [1] - 1695:18</p> <p><b>DEPONENTS</b> [1] - 1746:15</p>	<p><b>DEPOSED</b> [3] - 1744:11, 1744:12, 1750:6</p> <p><b>DEPOSITION</b> [7] - 1694:8, 1694:11, 1713:3, 1713:12, 1747:3, 1749:6, 1751:8</p> <p><b>DEPOSITIONS</b> [1] - 1744:14</p> <p><b>DEPTHS</b> [4] - 1703:19, 1705:13, 1705:14, 1706:8</p> <p><b>DEPUTY</b> [4] - 1728:17, 1728:25, 1729:2, 1743:18</p> <p><b>DESCRIBE</b> [2] - 1734:13, 1741:20</p> <p><b>DESCRIBED</b> [3] - 1681:10, 1694:7, 1708:6</p> <p><b>DESIGNATE</b> [1] - 1746:1</p> <p><b>DESIGNATED</b> [10] - 1731:11, 1745:17, 1745:18, 1745:24, 1747:10, 1747:13, 1747:14, 1747:16, 1747:17, 1748:17</p> <p><b>DESIGNATION</b> [3] - 1745:21, 1747:20, 1750:1</p> <p><b>DETAIL</b> [1] - 1723:8</p> <p><b>DETECT</b> [4] - 1691:23, 1695:10, 1727:13, 1727:15</p> <p><b>DETECTED</b> [20] - 1679:25, 1680:11, 1680:12, 1682:16, 1683:12, 1683:13, 1683:15, 1684:4, 1684:5, 1684:6, 1684:15, 1684:16, 1684:21, 1685:3, 1688:24, 1690:19, 1695:25, 1719:19, 1719:23, 1719:24</p> <p><b>DETECTION</b> [3] - 1687:11, 1720:10, 1733:25</p> <p><b>DETECTIONS</b> [22] - 1686:8, 1686:11, 1687:24, 1688:2, 1688:5, 1693:7, 1700:22, 1701:18, 1706:13, 1707:12, 1707:13, 1707:14, 1707:22, 1708:4, 1708:7, 1710:6, 1723:9, 1731:18,</p>	<p>1732:21, 1736:2, 1736:16, 1736:24</p> <p><b>DETECTIONS</b> [1] - 1701:5</p> <p><b>DETECTS</b> [1] - 1695:18</p> <p><b>DETERMINE</b> [2] - 1696:19, 1724:10</p> <p><b>DIAGNOSIS</b> [1] - 1748:11</p> <p><b>DIAMETER</b> [2] - 1692:6, 1705:16</p> <p><b>DIFFERENCE</b> [5] - 1693:12, 1693:15, 1712:6, 1724:23, 1734:17</p> <p><b>DIFFERENCES</b> [2] - 1718:10, 1734:13</p> <p><b>DIFFERENT</b> [21] - 1694:3, 1698:13, 1699:13, 1699:16, 1700:20, 1701:2, 1705:13, 1705:14, 1705:20, 1705:22, 1706:8, 1706:9, 1717:23, 1722:20, 1722:21, 1722:22, 1724:7, 1724:11, 1724:15, 1726:16, 1750:10</p> <p><b>DIFFERENTIATION</b> [1] - 1723:1</p> <p><b>DILUTES</b> [1] - 1715:23</p> <p><b>DILUTION</b> [3] - 1694:7, 1694:14, 1720:17</p> <p><b>DIRECT</b> [1] - 1729:9</p> <p><b>DIRECT</b> [9] - 1682:7, 1685:11, 1693:7, 1700:19, 1704:20, 1707:9, 1709:11, 1715:21, 1745:14</p> <p><b>DIRECTED</b> [1] - 1739:9</p> <p><b>DIRECTION</b> [3] - 1688:8, 1708:20, 1728:9</p> <p><b>DIRECTLY</b> [5] - 1697:13, 1717:5, 1732:5, 1738:21, 1743:5</p> <p><b>DISAGREE</b> [1] - 1691:1</p> <p><b>DISCERN</b> [1] - 1724:16</p> <p><b>DISCLOSE</b> [1] - 1748:22</p> <p><b>DISCUSSED</b> [3] - 1709:20, 1715:8, 1731:24</p>	<p><b>DISCUSSING</b> [1] - 1732:8</p> <p><b>DISCUSSION</b> [7] - 1736:8, 1738:2, 1738:4, 1738:20, 1740:13, 1741:22, 1751:2</p> <p><b>DISCUSSIONS</b> [7] - 1736:15, 1737:11, 1737:14, 1739:4, 1739:5, 1739:24, 1743:7</p> <p><b>DISPERSION</b> [4] - 1709:21, 1715:21, 1715:22, 1720:17</p> <p><b>DISREGARD</b> [1] - 1716:18</p> <p><b>DISSOLVE</b> [1] - 1704:10</p> <p><b>DISTANCE</b> [1] - 1724:19</p> <p><b>DISTINCT</b> [1] - 1698:10</p> <p><b>DISTINCTION</b> [2] - 1748:9, 1749:11</p> <p><b>DISTRIBUTED</b> [1] - 1734:24</p> <p><b>DISTRIBUTION</b> [5] - 1700:13, 1700:18, 1700:19, 1700:25, 1701:2</p> <p><b>DOCUMENT</b> [3] - 1685:14, 1685:15</p> <p><b>DOCUMENTATION</b> [1] - 1742:11</p> <p><b>DOCUMENTS</b> [8] - 1683:18, 1683:21, 1685:9, 1685:12, 1685:19, 1686:1, 1686:3, 1692:20</p> <p><b>DOMINANT</b> [1] - 1702:14</p> <p><b>DONE</b> [7] - 1697:2, 1697:17, 1733:24, 1734:6, 1738:7, 1750:25, 1751:14</p> <p><b>DOT</b> [2] - 1687:10, 1687:14</p> <p><b>DOTS</b> [18] - 1687:1, 1687:2, 1687:4, 1688:1, 1704:17, 1721:19, 1721:21, 1722:11, 1722:12, 1722:17, 1722:18, 1722:20, 1722:21, 1723:6, 1723:10, 1728:1</p> <p><b>DOUBT</b> [3] - 1688:5, 1711:25, 1749:13</p> <p><b>DOWN</b> [14] - 1695:17,</p>
<b>D</b>				
<p><b>DAILY</b> [1] - 1678:19</p> <p><b>DANIEL</b> [1] - 1738:13</p> <p><b>DASHED</b> [2] - 1689:18, 1691:17</p> <p><b>DASHES</b> [1] - 1690:2</p> <p><b>DATA</b> [41] - 1681:22, 1682:11, 1682:12, 1688:7, 1690:7, 1690:12, 1692:3, 1693:2, 1693:5, 1695:21, 1701:17, 1702:1, 1702:9, 1702:23, 1702:24, 1703:2, 1703:12, 1703:13, 1703:23, 1704:2, 1706:21, 1706:22, 1707:20, 1707:24, 1710:20, 1711:8, 1711:14, 1712:16, 1720:24,</p>				

1695:18, 1699:15, 1704:10, 1708:18, 1716:3, 1717:8, 1727:6, 1728:12, 1732:18, 1734:23, 1736:1, 1743:21, 1746:23 <b>DOWNGRADIANT</b> [2] - - 1720:18, 1739:2 <b>DR</b> [2] - 1696:14, 1742:7 <b>DRAFT</b> [1] - 1686:22 <b>DRAFTING</b> [1] - 1742:11 <b>DRAMATICALLY</b> [3] - 1723:19, 1723:25, 1724:6 <b>DRAW</b> [8] - 1691:16, 1691:17, 1692:9, 1693:11, 1723:24, 1725:11, 1726:18, 1748:9 <b>DRAWING</b> [1] - 1724:5 <b>DRAWN</b> [3] - 1682:1, 1691:8, 1718:22 <b>DREW</b> [2] - 1690:9, 1691:16 <b>DRINKING</b> [1] - 1731:9 <b>DRINKING</b> [1] - 1693:19 <b>DROUGHTS</b> [1] - 1724:13 <b>DTSC</b> [4] - 1685:10, 1685:16, 1685:17, 1685:19 <b>DUE</b> [3] - 1707:18, 1709:22, 1720:17 <b>DURANT</b> [5] - 1745:10, 1745:20, 1746:17, 1747:9, 1750:6 <b>DURING</b> [5] - 1685:25, 1699:13, 1730:10, 1735:13, 1749:6 <b>DW</b> [2] - 1714:20, 1715:3	<b>EDGE</b> [5] - 1687:25, 1688:6, 1704:12, 1715:17, 1720:25 <b>EDUCATION</b> [1] - 1750:4 <b>EFFECTIVE</b> [1] - 1734:15 <b>EFFECTIVENESS</b> [1] - 1739:6 <b>EFFICACY</b> [1] - 1732:8 <b>EFFORT</b> [1] - 1738:25 <b>EFFORTS</b> [1] - 1685:20 <b>ELABORATE</b> [1] - 1738:22 <b>EMANATED</b> [2] - 1683:20, 1720:10 <b>END</b> [3] - 1709:23, 1735:18, 1751:3 <b>ENDED</b> [1] - 1730:11 <b>ENGINEER</b> [3] - 1729:12, 1729:25 <b>ENGINEERING</b> [2] - 1729:21, 1729:23 <b>ENGINEERS</b> [1] - 1695:12 <b>ENGINEERS</b> [1] - 1736:9 <b>ENLARGE</b> [3] - 1689:21, 1689:24, 1699:21 <b>ENTAIL</b> [1] - 1729:13 <b>ENTIRE</b> [1] - 1701:1 <b>ENVIRONMENT</b> [1] - 1712:14 <b>ENVIRONMENTAL</b> [3] - 1729:12, 1729:14, 1729:16 <b>ERROR</b> [1] - 1707:17 <b>ESSENTIALLY</b> [3] - 1689:14, 1718:4, 1718:7 <b>ESTABLISHED</b> [4] - 1697:7, 1697:12, 1712:7, 1714:23 <b>ESTIMATE</b> [2] - 1744:7, 1745:6 <b>ESTIMATES</b> [1] - 1743:24 <b>ET</b> [5] - 1684:13, 1724:13, 1742:11, 1742:25 <b>EVACUATE</b> [1] - 1714:7 <b>EVALUATE</b> [3] - 1709:7, 1739:1, 1751:9 <b>EVALUATING</b> [2] - 1739:6, 1751:7	<b>EVALUATION</b> [1] - 1739:11 <b>EVENTS</b> [1] - 1724:13 <b>EVENTUALLY</b> [2] - 1717:6, 1737:22 <b>EVIDENCE</b> [7] - 1694:19, 1700:8, 1704:13, 1707:8, 1721:12, 1751:3, 1751:14 <b>EXACT</b> [1] - 1684:23 <b>EXACTLY</b> [4] - 1691:9, 1708:14, 1724:16, 1736:20 <b>EXAMINATION</b> [5] - 1678:11, 1682:7, 1744:8, 1746:8, 1746:9 <b>EXAMINATION</b> [6] - 1678:15, 1713:1, 1720:5, 1727:1, 1727:23, 1729:9 <b>EXAMINED</b> [2] - 1725:4, 1725:10 <b>EXAMPLE</b> [8] - 1691:21, 1697:15, 1706:6, 1715:6, 1720:23, 1723:6, 1724:9, 1748:22 <b>EXCHANGE</b> [2] - 1734:10, 1734:14 <b>EXCUSE</b> [2] - 1716:13, 1740:7 <b>EXCUSED</b> [1] - 1728:11 <b>EXHIBIT</b> [2] - 1686:4, 1686:15 <b>EXHIBIT</b> [12] - 1682:6, 1688:17, 1694:17, 1694:19, 1699:1, 1699:18, 1704:13, 1704:14, 1707:7, 1708:15, 1721:11, 1721:14 <b>EXPECT</b> [8] - 1693:15, 1693:25, 1704:4, 1718:19, 1724:25, 1727:16, 1728:7, 1750:25 <b>EXPERT</b> [26] - 1689:1, 1701:20, 1702:2, 1725:17, 1731:11, 1745:15, 1745:16, 1745:17, 1745:19, 1746:3, 1747:10, 1747:13, 1747:19, 1747:23, 1748:5, 1748:8, 1748:17, 1748:24, 1749:12, 1749:14, 1749:15,	1749:16, 1750:4, 1750:5, 1750:10, 1750:17 <b>EXPERTISE</b> [2] - 1748:18, 1750:4 <b>EXPERTS</b> [5] - 1678:25, 1707:23, 1708:1, 1730:10, 1750:2 <b>EXPLAIN</b> [3] - 1700:12, 1709:10, 1732:11 <b>EXPRESSED</b> [1] - 1749:4 <b>EXTENDED</b> [1] - 1725:1 <b>EXTENDING</b> [1] - 1688:20 <b>EXTENSIVELY</b> [2] - 1702:10, 1703:3 <b>EXTENT</b> [5] - 1688:24, 1702:11, 1711:8, 1723:19, 1723:24 <b>EXTRACTION</b> [3] - 1693:20, 1702:19, 1702:21	<b>FAR</b> [5] - 1720:25, 1725:1, 1725:12, 1736:20 <b>FASHION</b> [1] - 1732:23 <b>FAST</b> [5] - 1702:13, 1725:15, 1725:17, 1725:22, 1725:23 <b>FASTER</b> [3] - 1702:11, 1718:4, 1719:1 <b>FATE</b> [1] - 1712:7 <b>FEET</b> [2] - 1715:8, 1722:7 <b>FELLOW</b> [1] - 1736:9 <b>FEW</b> [7] - 1684:20, 1701:24, 1711:17, 1719:16, 1722:5, 1723:9, 1730:12 <b>FEWER</b> [1] - 1692:19 <b>FIELD</b> [3] - 1714:22, 1718:11, 1718:16 <b>FIGHTING</b> [1] - 1749:20 <b>FIGURE</b> [11] - 1686:10, 1686:19, 1688:19, 1688:22, 1694:15, 1694:24, 1695:1, 1697:21, 1707:13, 1710:14, 1746:5 <b>FIGURE</b> [6] - 1686:16, 1688:16, 1689:9, 1690:16, 1698:25, 1708:16 <b>FIGURES</b> [3] - 1688:16, 1698:25, 1699:1 <b>FILED</b> [1] - 1740:12 <b>FINAL</b> [1] - 1730:13 <b>FINDINGS</b> [1] - 1699:18 <b>FINE</b> [2] - 1684:25, 1751:11 <b>FINISHED</b> [1] - 1741:23 <b>FIRM</b> [1] - 1686:21 <b>FIRST</b> [25] - 1681:2, 1684:2, 1684:8, 1684:12, 1684:14, 1684:18, 1685:2, 1685:3, 1700:7, 1701:8, 1714:3, 1719:15, 1719:16, 1719:19, 1719:23, 1719:24, 1722:24, 1730:5, 1730:12, 1732:20, 1732:24, 1733:1, 1737:3, 1741:23, 1741:25 <b>FIT</b> [1] - 1748:16
<b>F</b>				
<b>FACILITY</b> [3] - 1732:9, 1732:16, 1733:21 <b>FACILITY</b> [6] - 1700:8, 1701:11, 1701:14, 1702:5, 1702:8, 1731:2 <b>FACT</b> [2] - 1683:23, 1740:21 <b>FACTORS</b> [2] - 1694:4, 1694:5 <b>FACTUAL</b> [1] - 1750:20 <b>FAIR</b> [24] - 1678:18, 1679:7, 1679:18, 1680:17, 1681:8, 1682:5, 1683:16, 1691:10, 1691:24, 1692:5, 1703:9, 1708:13, 1709:3, 1711:5, 1711:7, 1712:21, 1722:3, 1725:2, 1726:20, 1740:1, 1740:2, 1741:18, 1741:19, 1749:5 <b>FAIRLY</b> [4] - 1692:5, 1708:19, 1716:22, 1735:15 <b>FALLS</b> [1] - 1749:3 <b>FAMILIAR</b> [2] - 1697:1, 1730:2				



<p><b>FIVE</b> [2] - 1688:1, 1744:21</p> <p><b>FLOW</b> [8] - 1681:10, 1688:8, 1688:10, 1695:19, 1695:20, 1708:19, 1708:21, 1709:22</p> <p><b>FLURRY</b> [1] - 1686:5</p> <p><b>FOCUS</b> [2] - 1678:22, 1727:3</p> <p><b>FOCUSING</b> [3] - 1712:15, 1731:16, 1741:15</p> <p><b>FOLKS</b> [8] - 1695:11, 1700:5, 1726:11, 1736:15, 1737:12, 1738:21, 1740:21, 1741:12</p> <p><b>FOLLOWED</b> [1] - 1714:1</p> <p><b>FOLLOWING</b> [1] - 1730:18</p> <p><b>FOLLOWS</b> [1] - 1702:2</p> <p><b>FOLLOWS</b> [2] - 1678:14, 1729:8</p> <p><b>FOODS</b> [1] - 1734:11</p> <p><b>FORMATION</b> [5] - 1697:11, 1700:14, 1700:16, 1701:6, 1702:15</p> <p><b>FORMATIONS</b> [1] - 1717:7</p> <p><b>FORMER</b> [4] - 1700:8, 1701:11, 1702:4, 1702:7</p> <p><b>FORTHCOMING</b> [1] - 1736:23</p> <p><b>FORWARD</b> [2] - 1728:18, 1749:1</p> <p><b>FOUR</b> [6] - 1683:23, 1685:4, 1688:1, 1691:3, 1691:6, 1694:13</p> <p><b>FRAME</b> [1] - 1736:7</p> <p><b>FRCP</b> [1] - 1749:10</p> <p><b>FRIENDLY</b> [1] - 1741:25</p> <p><b>FUNDED</b> [1] - 1731:2</p> <p><b>FUNDS</b> [1] - 1743:5</p> <p><b>FURTHER</b> [2] - 1727:1, 1727:23</p> <p><b>FUTURE</b> [5] - 1732:17, 1733:9, 1734:5, 1738:19, 1739:2</p>	<p>1729:10, 1730:18, 1739:24, 1741:5, 1743:10</p> <p><b>GALLAGHER</b> [1] - 1729:5</p> <p><b>GALLONS</b> [3] - 1693:20, 1724:21, 1725:7</p> <p><b>GAME</b> [1] - 1749:5</p> <p><b>GARY</b> [1] - 1678:13</p> <p><b>GAS</b> [1] - 1703:12</p> <p><b>GENERAL</b> [7] - 1682:22, 1693:25, 1701:10, 1709:9, 1711:22, 1720:21, 1732:23</p> <p><b>GENERALLY</b> [18] - 1694:6, 1701:24, 1702:4, 1702:7, 1702:11, 1703:6, 1705:17, 1708:21, 1710:24, 1711:2, 1717:24, 1718:16, 1718:18, 1726:2, 1727:18, 1729:13, 1730:2, 1736:6</p> <p><b>GENESIS</b> [1] - 1730:24</p> <p><b>GENTLEMEN</b> [1] - 1743:11</p> <p><b>GEOLOGIST</b> [1] - 1690:6</p> <p><b>GEOLOGY</b> [1] - 1708:25</p> <p><b>GEOTECHNICAL</b> [1] - 1729:25</p> <p><b>GIVEN</b> [2] - 1740:16</p> <p><b>GLOBAL</b> [2] - 1738:14, 1738:15</p> <p><b>GOAL</b> [1] - 1733:8</p> <p><b>GOD</b> [1] - 1728:23</p> <p><b>GONZAGA</b> [1] - 1729:21</p> <p><b>GRAB</b> [1] - 1686:5</p> <p><b>GREATER</b> [2] - 1702:18, 1727:9</p> <p><b>GREEN</b> [7] - 1687:1, 1687:2, 1688:1, 1722:11, 1722:17, 1723:6, 1727:12</p> <p><b>GROUND</b> [2] - 1706:5, 1709:1</p> <p><b>GROUNDWATER</b> [47] - 1679:13, 1680:1, 1680:11, 1680:22, 1681:10, 1683:3, 1686:9, 1688:8, 1688:10, 1693:3, 1695:19, 1695:20, 1701:7, 1702:10,</p>	<p>1702:12, 1702:13, 1702:23, 1702:24, 1704:1, 1704:5, 1704:6, 1706:18, 1708:19, 1708:21, 1709:22, 1711:9, 1711:14, 1711:22, 1711:23, 1712:2, 1712:16, 1712:19, 1713:22, 1714:18, 1715:23, 1718:5, 1718:17, 1719:5, 1720:16, 1721:11, 1721:16, 1722:18, 1726:14, 1727:25, 1728:2, 1729:15</p> <p><b>GROUNDWATER</b> [2] - 1738:13, 1740:6</p> <p><b>GUESS</b> [3] - 1685:24, 1687:7, 1732:22</p> <p><b>GW-13</b> [1] - 1681:21</p>	<p><b>HOKKANEN</b> [3] - 1678:8, 1713:3, 1727:3</p> <p><b>HOKKANEN</b> [1] - 1678:13</p> <p><b>HOLD</b> [1] - 1716:17</p> <p><b>HONOR</b> [27] - 1678:12, 1684:5, 1685:7, 1686:5, 1686:6, 1686:16, 1689:11, 1692:24, 1694:17, 1705:24, 1712:25, 1720:2, 1721:12, 1727:21, 1728:13, 1729:6, 1730:15, 1741:2, 1744:2, 1744:21, 1745:25, 1748:6, 1748:20, 1749:10, 1749:24, 1750:10, 1751:15</p> <p><b>HOOK</b> [1] - 1735:3</p> <p><b>HOPEFULLY</b> [1] - 1739:21</p> <p><b>HOPING</b> [1] - 1738:16</p> <p><b>HOUR</b> [4] - 1745:14, 1746:11, 1746:12, 1747:1</p> <p><b>HOURS</b> [1] - 1746:7</p> <p><b>HSU-3</b> [1] - 1726:15</p> <p><b>HSUS</b> [2] - 1682:8, 1726:16</p> <p><b>HULA</b> [4] - 1687:16, 1687:18, 1687:20, 1687:21</p> <p><b>HYDRAULIC</b> [2] - 1724:11, 1739:21</p> <p><b>HYDRAULICALLY</b> [4] - 1697:6, 1697:8, 1697:13, 1697:14</p> <p><b>HYDROGEOLOGIST</b> [5] - 1690:6, 1693:4, 1701:1, 1708:3, 1715:18</p> <p><b>HYDROGEOLOGIST S</b> [1] - 1738:25</p> <p><b>HYDROGEOLOGY</b> [1] - 1710:2</p> <p><b>HYPOTHETICAL</b> [2] - 1713:16, 1713:17</p>	<p>1679:17, 1695:6, 1710:13, 1725:12</p> <p><b>IMMEDIATE</b> [1] - 1717:13</p> <p><b>IMPACT</b> [2] - 1725:14, 1733:10</p> <p><b>IMPACTED</b> [11] - 1698:1, 1698:16, 1701:10, 1710:9, 1723:19, 1723:22, 1723:25, 1732:25, 1733:2, 1733:22</p> <p><b>IMPACTS</b> [1] - 1739:3</p> <p><b>IMPAIRED</b> [1] - 1742:19</p> <p><b>IMPLEMENTED</b> [1] - 1748:2</p> <p><b>IMPLEMENTING</b> [1] - 1732:15</p> <p><b>IMPORTANT</b> [1] - 1738:15</p> <p><b>IMPROPER</b> [1] - 1747:12</p> <p><b>INCHES</b> [1] - 1705:16</p> <p><b>INCLUDE</b> [1] - 1681:14</p> <p><b>INCLUDES</b> [2] - 1700:13, 1722:25</p> <p><b>INCLUDING</b> [1] - 1678:7</p> <p><b>INCREASE</b> [1] - 1715:19</p> <p><b>INDEED</b> [1] - 1738:6</p> <p><b>INDICATE</b> [1] - 1703:18</p> <p><b>INDICATING</b> [12] - 1687:10, 1687:22, 1691:19, 1691:20, 1691:21, 1691:22, 1691:23, 1705:9, 1705:10, 1706:6, 1709:17, 1721:19</p> <p><b>INDICATING</b> [6] - 1687:5, 1689:14, 1690:17, 1705:10, 1707:2, 1727:4</p> <p><b>INDIVIDUALS</b> [1] - 1750:2</p> <p><b>INFILTRATES</b> [1] - 1704:9</p> <p><b>INFLUENCED</b> [1] - 1698:6</p> <p><b>INFLUENCES</b> [1] - 1724:16</p> <p><b>INFORMATION</b> [14] - 1689:8, 1703:17, 1706:18, 1721:6, 1725:14, 1736:23, 1738:9, 1738:11, 1738:12, 1738:24,</p>
<b>H</b>				
<p><b>HALF</b> [1] - 1746:7</p> <p><b>HAND</b> [2] - 1721:14, 1728:20</p> <p><b>HANDFUL</b> [1] - 1708:4</p> <p><b>HARD</b> [1] - 1724:16</p> <p><b>HASSAN</b> [1] - 1732:5</p> <p><b>HEAR</b> [7] - 1680:8, 1681:2, 1686:25, 1720:11, 1720:13, 1747:6, 1749:8</p> <p><b>HEARD</b> [5] - 1684:8, 1687:16, 1687:18, 1744:9, 1751:13</p> <p><b>HEARSAY</b> [1] - 1741:3</p> <p><b>HELP</b> [2] - 1728:23, 1729:14</p> <p><b>HIGH</b> [3] - 1694:11, 1703:18, 1728:3</p> <p><b>HIGHER</b> [6] - 1693:7, 1693:25, 1702:16, 1715:10, 1720:8, 1721:25</p> <p><b>HIGHEST</b> [2] - 1722:12, 1723:11</p> <p><b>HIGHLY</b> [1] - 1742:19</p> <p><b>HILL</b> [10] - 1689:3, 1690:4, 1690:20, 1694:18, 1695:5, 1695:11, 1699:25, 1710:14, 1713:8, 1717:16</p> <p><b>HIRED</b> [2] - 1695:12, 1749:14</p> <p><b>HISTORY</b> [3] - 1678:17, 1678:23, 1687:19</p>				
<b>I</b>				
<p><b>IDEA</b> [7] - 1687:15, 1687:20, 1705:1, 1710:15, 1712:13, 1720:16, 1732:17</p> <p><b>IDENTIFICATION</b> [1] - 1703:12</p> <p><b>IDENTIFIED</b> [4] -</p>				
<b>G</b>				
<p><b>GALLAGHER</b> [7] - 1728:16, 1729:6,</p>				

1740:4, 1740:7, 1740:8, 1746:14 <b>INFORMED</b> [1] - 1740:20 <b>INITIAL</b> [3] - 1730:8, 1730:10, 1735:25 <b>INJECTION</b> [3] - 1696:6, 1696:18, 1697:1 <b>INSTALL</b> [3] - 1721:22, 1740:15, 1741:9 <b>INSTALLATION</b> [1] - 1707:5 <b>INSTALLED</b> [19] - 1692:13, 1704:21, 1704:23, 1705:6, 1707:3, 1707:15, 1721:5, 1731:2, 1733:8, 1733:21, 1734:9, 1734:21, 1735:9, 1735:12, 1735:14, 1735:18, 1739:20, 1741:24 <b>INSTRUCTION</b> [1] - 1750:24 <b>INSTRUCTIONS</b> [1] - 1751:3 <b>INTENDED</b> [1] - 1750:7 <b>INTENDING</b> [1] - 1748:3 <b>INTENT</b> [2] - 1747:21, 1748:4 <b>INTEREST</b> [2] - 1703:6, 1734:5 <b>INTERESTED</b> [2] - 1707:20, 1709:5 <b>INTERIM</b> [1] - 1730:12 <b>INTERPRETATION</b> [5] - 1682:9, 1682:10, 1689:16, 1689:17, 1690:2 <b>INVOLVED</b> [11] - 1679:3, 1730:8, 1732:3, 1732:7, 1741:20, 1742:14, 1742:17, 1742:24, 1743:2, 1743:5, 1743:15 <b>INVOLVEMENT</b> [2] - 1730:5, 1742:10 <b>INVOLVES</b> [1] - 1742:20 <b>INVOLVING</b> [1] - 1681:25 <b>ION</b> [1] - 1734:14 <b>IRRELEVANT</b> [1] - 1679:9 <b>IRVINE</b> [1] - 1729:23	<b>ISSUE</b> [8] - 1682:2, 1683:1, 1689:8, 1691:3, 1700:6, 1700:10, 1712:3, 1712:18 <b>ISSUES</b> [5] - 1729:15, 1732:10, 1736:12, 1750:24 <b>ITSELF</b> [4] - 1691:25, 1714:8, 1724:17, 1724:18  <b>J</b>  <b>JISA</b> [1] - 1744:20 <b>JOB</b> [1] - 1725:2 <b>JURY</b> [11] - 1678:4, 1678:7, 1679:5, 1680:20, 1680:23, 1716:18, 1743:18, 1743:20, 1743:23, 1750:23, 1751:2 <b>JURY'S</b> [1] - 1747:19  <b>K</b>  <b>KEEP</b> [1] - 1743:16 <b>KIND</b> [2] - 1703:23, 1735:21 <b>KNOWLEDGE</b> [4] - 1731:16, 1748:5, 1750:3 <b>KNOWS</b> [1] - 1740:19  <b>L</b>  <b>LAB</b> [1] - 1707:17 <b>LABORIOUS</b> [1] - 1742:17 <b>LACK</b> [1] - 1690:11 <b>LADIES</b> [1] - 1743:11 <b>LAKE</b> [1] - 1730:9 <b>LARDIERE</b> [6] - 1739:4, 1739:10, 1739:25, 1740:13, 1740:24, 1741:8 <b>LARGE</b> [2] - 1679:18, 1738:11 <b>LAST</b> [3] - 1719:8, 1727:21, 1729:3 <b>LATE</b> [1] - 1703:18 <b>LAW</b> [1] - 1720:9 <b>LAWS</b> [1] - 1716:5 <b>LAWSUIT</b> [2] - 1734:3, 1740:12 <b>LAWYER</b> [1] - 1750:13 <b>LAYER</b> [1] - 1722:25 <b>LAYERS</b> [1] - 1706:9 <b>LEAD</b> [1] - 1732:6 <b>LEADING</b> [1] -	1719:12 <b>LEARN</b> [2] - 1692:21, 1738:16 <b>LEARNED</b> [1] - 1743:4 <b>LEAST</b> [4] - 1697:5, 1710:14, 1711:20, 1750:20 <b>LECHLER</b> [10] - 1713:4, 1713:6, 1713:7, 1713:12, 1718:23, 1744:16, 1745:7, 1745:13, 1746:8, 1746:10 <b>LECTERN</b> [1] - 1747:7 <b>LEFT</b> [1] - 1721:14 <b>LEFT-HAND</b> [1] - 1721:14 <b>LEGAL</b> [1] - 1749:23 <b>LEGEND</b> [2] - 1688:23, 1727:6 <b>LESS</b> [3] - 1716:20, 1725:1, 1746:12 <b>LETTER</b> [2] - 1694:20, 1739:8 <b>LEVEL</b> [3] - 1695:17, 1717:7, 1738:11 <b>LEVELS</b> [2] - 1728:3, 1738:10 <b>LIBRARY</b> [3] - 1714:20, 1715:3, 1720:24 <b>LICENSED</b> [2] - 1729:24, 1729:25 <b>LIKELY</b> [3] - 1688:7, 1702:3, 1747:12 <b>LIMIT</b> [2] - 1688:25, 1749:16 <b>LIMITED</b> [1] - 1707:22 <b>LIMITING</b> [1] - 1746:24 <b>LINE</b> [9] - 1679:13, 1689:11, 1690:9, 1691:17, 1709:11, 1722:4, 1726:11, 1728:4 <b>LINEAR</b> [3] - 1732:23, 1733:15, 1735:21 <b>LINES</b> [3] - 1689:18, 1700:7, 1710:18 <b>LITANY</b> [1] - 1729:16 <b>LITERALLY</b> [3] - 1685:4, 1706:4, 1708:4 <b>LITIGATION</b> [2] - 1730:8, 1730:10 <b>LIVE</b> [2] - 1744:15, 1751:8 <b>LIVING</b> [1] - 1729:11 <b>LOCATED</b> [4] - 1687:20, 1687:21,	1701:24, 1734:10 <b>LOCATION</b> [3] - 1700:23, 1701:10, 1702:1 <b>LOCATIONS</b> [2] - 1703:19, 1706:3 <b>LOGICAL</b> [1] - 1706:21 <b>LOGS</b> [2] - 1678:19, 1714:22 <b>LOOK</b> [30] - 1682:6, 1688:18, 1694:16, 1697:22, 1698:24, 1698:25, 1699:5, 1699:17, 1702:23, 1703:3, 1704:12, 1708:18, 1712:15, 1714:22, 1717:22, 1717:23, 1718:8, 1720:18, 1721:10, 1721:14, 1721:18, 1723:14, 1724:8, 1725:16, 1726:7, 1747:6, 1747:8, 1750:18 <b>LOOKED</b> [18] - 1681:24, 1685:9, 1686:1, 1686:10, 1688:19, 1697:9, 1700:18, 1702:9, 1702:23, 1703:2, 1703:15, 1703:21, 1703:23, 1704:2, 1707:24, 1725:3, 1725:8, 1725:20 <b>LOOKING</b> [8] - 1688:22, 1699:8, 1702:25, 1706:1, 1708:3, 1718:14, 1722:11, 1740:21 <b>LOOKS</b> [2] - 1695:23, 1723:7 <b>LOS</b> [1] - 1678:2 <b>LOST</b> [1] - 1722:14 <b>LOWER</b> [4] - 1697:15, 1717:6, 1717:8, 1720:10 <b>LUCE</b> [1] - 1744:20 <b>LUNCH</b> [1] - 1685:18  <b>M</b>  <b>MAIN</b> [3] - 1703:6, 1713:7, 1715:20 <b>MAINTAIN</b> [1] - 1738:11 <b>MALL</b> [7] - 1693:6, 1693:16, 1694:11, 1713:19, 1714:20, 1715:3, 1720:24	<b>MANAGED</b> [1] - 1742:6 <b>MANUFACTURE</b> [1] - 1679:20 <b>MAP</b> [5] - 1717:15, 1718:8, 1721:14, 1722:18, 1722:25 <b>MAPS</b> [4] - 1681:25, 1708:21, 1717:22 <b>MARCH</b> [1] - 1731:17 <b>MARK</b> [2] - 1687:23, 1690:10 <b>MARKET</b> [1] - 1734:11 <b>MARKS</b> [8] - 1689:11, 1689:25, 1690:6, 1690:15, 1691:17, 1710:13, 1710:16, 1710:18 <b>MASTER'S</b> [1] - 1729:22 <b>MATCH</b> [2] - 1718:9, 1718:22 <b>MATERIALS</b> [1] - 1703:10 <b>MATTER</b> [4] - 1678:6, 1716:10, 1731:10, 1743:15 <b>MATTERS</b> [2] - 1729:15, 1731:14 <b>MCL</b> [7] - 1727:9, 1727:11, 1727:13, 1728:1, 1728:2, 1736:3 <b>MEAN</b> [10] - 1698:21, 1703:2, 1709:5, 1709:13, 1710:2, 1725:9, 1731:23, 1736:8, 1736:14, 1736:20 <b>MEANING</b> [1] - 1747:19 <b>MEANS</b> [6] - 1701:1, 1701:8, 1708:4, 1710:18, 1719:25, 1745:17 <b>MEANT</b> [1] - 1737:8 <b>MECHANISM</b> [1] - 1683:2 <b>MEDIA</b> [2] - 1734:14, 1734:15 <b>MEETING</b> [1] - 1732:1 <b>MEETINGS</b> [4] - 1730:22, 1730:25, 1732:8, 1738:1 <b>MEMORIZED</b> [2] - 1704:24, 1707:5 <b>MEMORY</b> [3] - 1684:5, 1732:22, 1735:10 <b>MENTIONED</b> [4] - 1679:16, 1693:6,
--	--	---	---	--

1714:24, 1724:12 <b>MIGHT</b> [1] - 1733:9 <b>MIGRATE</b> [4] - 1683:23, 1704:1, 1704:6, 1704:10 <b>MIGRATED</b> [1] - 1682:1 <b>MIGRATES</b> [2] - 1702:10, 1709:21 <b>MIGRATING</b> [5] - 1681:12, 1681:14, 1719:23, 1725:15, 1732:18 <b>MIGRATION</b> [6] - 1679:14, 1723:25, 1724:2, 1733:9, 1734:5, 1738:19 <b>MILE</b> [1] - 1716:1 <b>MIND</b> [6] - 1711:25, 1723:5, 1743:16, 1748:10, 1750:19, 1751:21 <b>MINUTE</b> [6] - 1693:21, 1723:16, 1724:21, 1725:7, 1726:3, 1741:15 <b>MINUTES</b> [4] - 1744:4, 1744:10, 1746:18, 1746:24 <b>MISCHIEF</b> [1] - 1749:7 <b>MISTAKEN</b> [2] - 1687:22, 1735:7 <b>MIXING</b> [1] - 1715:23 <b>MODEL</b> [2] - 1697:8, 1699:5 <b>MOLECULES</b> [1] - 1698:13 <b>MOMENTOUS</b> [1] - 1749:21 <b>MONITOR</b> [1] - 1705:13 <b>MONITORED</b> [1] - 1714:11 <b>MONITORING</b> [39] - 1685:17, 1690:7, 1690:12, 1691:20, 1691:22, 1691:24, 1692:2, 1692:5, 1692:10, 1692:12, 1692:16, 1692:18, 1692:22, 1693:2, 1693:17, 1694:4, 1694:12, 1695:4, 1695:15, 1697:18, 1700:22, 1700:24, 1704:17, 1705:5, 1705:17, 1706:17, 1707:14, 1710:5, 1713:22, 1714:10, 1720:8, 1720:24,	1721:5, 1721:22, 1722:1, 1722:4, 1724:8, 1724:10, 1736:22 <b>MONTHLY</b> [2] - 1730:22, 1730:24 <b>MORNING</b> [2] - 1686:15, 1744:17 <b>MOST</b> [1] - 1692:12 <b>MOVE</b> [7] - 1702:13, 1715:18, 1717:8, 1718:17, 1719:5, 1719:6, 1722:5 <b>MOVED</b> [3] - 1708:10, 1724:15, 1725:18 <b>MOVES</b> [14] - 1702:10, 1708:7, 1712:8, 1712:9, 1718:1, 1718:3, 1718:4, 1718:6, 1718:15, 1718:17, 1719:1, 1719:7, 1727:17 <b>MOVING</b> [8] - 1681:12, 1707:21, 1708:5, 1708:8, 1709:6, 1709:24, 1723:7, 1725:23 <b>MP-01</b> [1] - 1707:1 <b>MR</b> [92] - 1678:12, 1678:16, 1679:9, 1679:11, 1679:12, 1685:7, 1685:8, 1686:4, 1686:7, 1686:13, 1686:17, 1688:12, 1688:13, 1688:14, 1688:15, 1689:21, 1689:23, 1689:24, 1690:1, 1692:24, 1693:1, 1694:16, 1694:20, 1694:21, 1699:20, 1699:24, 1705:3, 1705:4, 1706:12, 1708:15, 1708:17, 1712:22, 1712:25, 1713:2, 1716:15, 1716:20, 1719:12, 1719:14, 1720:2, 1720:3, 1720:6, 1721:10, 1721:13, 1726:4, 1726:6, 1726:22, 1726:23, 1727:2, 1727:20, 1727:21, 1727:24, 1728:10, 1728:16, 1729:6, 1729:10, 1730:15, 1730:18, 1739:24, 1741:2, 1741:5, 1743:10, 1744:2, 1744:6,	1744:9, 1744:12, 1744:15, 1744:21, 1744:25, 1745:2, 1745:5, 1745:9, 1745:13, 1745:18, 1745:21, 1745:24, 1746:11, 1746:17, 1746:22, 1747:4, 1747:15, 1748:1, 1748:6, 1748:20, 1749:10, 1749:24, 1750:9, 1750:15, 1751:7, 1751:15, 1751:20, 1751:23, 1752:2 <b>MULTIPLE</b> [1] - 1709:19 <b>MULTIPLE</b> [2] - 1699:21, 1700:7  <b>N</b>  <b>NAME</b> [2] - 1729:3 <b>NAMED</b> [1] - 1749:12 <b>NARRATIVE</b> [1] - 1730:15 <b>NATURE</b> [7] - 1730:24, 1737:14, 1737:22, 1738:1, 1746:2, 1747:18, 1748:24 <b>NEAR</b> [5] - 1697:2, 1715:10, 1715:15, 1715:25, 1735:18 <b>NEARBY</b> [2] - 1698:16, 1731:25 <b>NECESSARILY</b> [2] - 1680:8, 1748:12 <b>NECESSARY</b> [1] - 1738:6 <b>NEED</b> [3] - 1725:13, 1732:11, 1747:8 <b>NEEDED</b> [6] - 1734:2, 1734:3, 1739:12, 1740:8, 1740:20 <b>NETWORK</b> [1] - 1734:20 <b>NEVER</b> [1] - 1690:18 <b>NEXT</b> [6] - 1701:5, 1701:9, 1728:14, 1733:15, 1735:3, 1735:22 <b>NINE</b> [1] - 1708:8 <b>NON</b> [16] - 1692:10, 1695:10, 1695:18, 1727:13, 1727:15, 1745:15, 1745:16, 1745:19, 1747:13, 1749:12, 1749:13, 1749:15, 1749:16,	1750:2, 1750:5, 1750:9 <b>NON-DESIGNATED</b> [1] - 1747:13 <b>NON-DETECT</b> [3] - 1695:10, 1727:13, 1727:15 <b>NON-DETECTS</b> [1] - 1695:18 <b>NON-PUMPING</b> [1] - 1692:10 <b>NON-RETAINED</b> [10] - 1745:15, 1745:16, 1745:19, 1749:12, 1749:13, 1749:15, 1749:16, 1750:2, 1750:5, 1750:9 <b>NORMAL</b> [1] - 1728:3 <b>NORMALLY</b> [1] - 1750:16 <b>NORTH</b> [1] - 1690:15 <b>NORTHERN</b> [2] - 1690:12, 1695:7 <b>NORTHWEST</b> [2] - 1709:15, 1709:24 <b>NOTED</b> [2] - 1707:12, 1711:4 <b>NOTHING</b> [1] - 1728:23 <b>NOTICE</b> [6] - 1731:17, 1731:21, 1733:18, 1736:2, 1736:17, 1737:15 <b>NOTIFICATION</b> [4] - 1731:22, 1736:4, 1737:1, 1737:2 <b>NOTIFIED</b> [1] - 1736:24 <b>NOTING</b> [2] - 1690:6, 1702:1 <b>NOTION</b> [1] - 1698:19 <b>NOVEMBER</b> [1] - 1678:1 <b>NUMBER</b> [13] - 1681:24, 1686:5, 1686:16, 1694:3, 1694:5, 1696:10, 1699:6, 1703:8, 1707:13, 1711:18, 1731:6, 1731:14, 1747:11 <b>NUMEROUS</b> [3] - 1701:16, 1710:2, 1720:21  <b>O</b>  <b>O'CLOCK</b> [2] - 1750:24, 1751:17 <b>OATH</b> [1] - 1678:8	<b>OBJECT</b> [1] - 1730:15 <b>OBJECTION</b> [6] - 1692:24, 1716:15, 1716:17, 1719:12, 1741:2, 1747:14 <b>OBJECTIONS</b> [3] - 1747:9, 1747:11, 1750:19 <b>OBLONG</b> [1] - 1688:22 <b>OBSERVATIONS</b> [1] - 1694:11 <b>OBTAIN</b> [1] - 1742:18 <b>OBTAINED</b> [1] - 1723:11 <b>OBVIOUSLY</b> [1] - 1732:7 <b>OCCURRED</b> [1] - 1687:13 <b>OFFER</b> [7] - 1745:25, 1747:18, 1748:12, 1749:1, 1750:5, 1750:7, 1750:13 <b>OFFERED</b> [1] - 1748:16 <b>OFFERING</b> [3] - 1746:2, 1748:7, 1748:24 <b>OFFSITE</b> [11] - 1690:7, 1690:12, 1692:17, 1692:23, 1693:2, 1695:25, 1713:14, 1721:4, 1722:5, 1732:4, 1733:1 <b>ONCE</b> [1] - 1722:5 <b>ONE</b> [42] - 1682:6, 1682:8, 1685:1, 1688:15, 1693:14, 1694:20, 1697:18, 1698:10, 1698:15, 1698:22, 1699:1, 1699:24, 1701:20, 1704:12, 1705:5, 1705:21, 1707:2, 1707:3, 1709:21, 1710:23, 1713:9, 1714:24, 1715:20, 1717:16, 1719:19, 1720:8, 1722:6, 1723:14, 1723:23, 1726:18, 1727:21, 1730:9, 1733:12, 1738:13, 1741:2, 1744:15, 1745:2, 1746:16, 1746:18, 1746:19, 1751:7 <b>ONES</b> [4] - 1696:9, 1700:5, 1700:6, 1745:10
---	--	---	--	--



<p><b>ONGOING</b> <sup>[1]</sup> - 1741:22</p> <p><b>ONLINE</b> <sup>[2]</sup> - 1735:5, 1735:9</p> <p><b>ONSITE</b> <sup>[4]</sup> - 1700:22, 1700:24, 1702:15, 1721:5</p> <p><b>OOO</b> <sup>[1]</sup> - 1678:3</p> <p><b>OOPS</b> <sup>[2]</sup> - 1709:13, 1726:23</p> <p><b>OPEN</b> <sup>[1]</sup> - 1743:16</p> <p><b>OPERATE</b> <sup>[1]</sup> - 1742:21</p> <p><b>OPERATING</b> <sup>[3]</sup> - 1733:21, 1737:17, 1737:19</p> <p><b>OPERATIONAL</b> <sup>[1]</sup> - 1678:20</p> <p><b>OPERATIONS</b> <sup>[1]</sup> - 1687:13</p> <p><b>OPINION</b> <sup>[15]</sup> - 1681:1, 1681:3, 1682:18, 1682:19, 1684:1, 1684:3, 1684:12, 1703:24, 1703:25, 1708:11, 1715:1, 1721:3, 1747:13, 1748:24, 1749:4</p> <p><b>OPINIONS</b> <sup>[14]</sup> - 1701:20, 1710:23, 1748:8, 1748:11, 1748:13, 1748:16, 1748:18, 1749:1, 1749:16, 1749:17, 1750:7, 1750:8, 1750:14, 1750:15</p> <p><b>ORANGE</b> <sup>[4]</sup> - 1709:13, 1709:23, 1710:5, 1717:17</p> <p><b>ORDER</b> <sup>[1]</sup> - 1684:11</p> <p><b>ORDERING</b> <sup>[1]</sup> - 1684:8</p> <p><b>ORDINARY</b> <sup>[1]</sup> - 1743:13</p> <p><b>ORIGINALLY</b> <sup>[3]</sup> - 1695:11, 1730:8, 1733:8</p> <p><b>ORIGINATE</b> <sup>[1]</sup> - 1709:4</p> <p><b>OTHERWISE</b> <sup>[2]</sup> - 1681:22, 1725:6</p> <p><b>OU-4</b> <sup>[2]</sup> - 1715:7, 1715:9</p> <p><b>OUTSIDE</b> <sup>[2]</sup> - 1743:23, 1748:13</p> <p><b>OVERLAP</b> <sup>[2]</sup> - 1702:4, 1702:7</p> <p><b>OVERRULED</b> <sup>[1]</sup> - 1679:10</p> <p><b>OWN</b> <sup>[1]</sup> - 1689:6</p>	<p><b>OWNERSHIP</b> <sup>[1]</sup> - 1728:4</p> <p><b>P</b></p> <p><b>P.M</b> <sup>[1]</sup> - 1678:1</p> <p><b>P.M</b> <sup>[1]</sup> - 1752:4</p> <p><b>PAGE</b> <sup>[5]</sup> - 1694:24, 1694:25, 1697:22, 1699:1, 1699:18</p> <p><b>PAID</b> <sup>[1]</sup> - 1741:10</p> <p><b>PARAGRAPH</b> <sup>[2]</sup> - 1699:20, 1699:22</p> <p><b>PART</b> <sup>[14]</sup> - 1686:14, 1686:25, 1687:3, 1687:7, 1702:6, 1724:1, 1725:18, 1725:23, 1725:25, 1732:1, 1737:2, 1740:18, 1741:16, 1744:3</p> <p><b>PARTIAL</b> <sup>[1]</sup> - 1723:17</p> <p><b>PARTICIPATED</b> <sup>[1]</sup> - 1713:21</p> <p><b>PARTICULAR</b> <sup>[3]</sup> - 1686:18, 1708:12, 1722:25</p> <p><b>PARTICULARLY</b> <sup>[1]</sup> - 1681:9</p> <p><b>PARTIES</b> <sup>[3]</sup> - 1749:20, 1750:23, 1751:17</p> <p><b>PARTS</b> <sup>[5]</sup> - 1681:20, 1687:11, 1705:22, 1715:12, 1715:16</p> <p><b>PAST</b> <sup>[2]</sup> - 1728:5, 1728:7</p> <p><b>PATH</b> <sup>[2]</sup> - 1733:15, 1735:22</p> <p><b>PATHWAY</b> <sup>[10]</sup> - 1681:4, 1683:2, 1709:10, 1709:12, 1709:14, 1709:16, 1709:23, 1711:22, 1712:1, 1735:21</p> <p><b>PATHWAYS</b> <sup>[5]</sup> - 1679:14, 1708:25, 1709:3, 1709:7</p> <p><b>PAY</b> <sup>[2]</sup> - 1692:22, 1740:25</p> <p><b>PAYING</b> <sup>[1]</sup> - 1741:7</p> <p><b>PCE</b> <sup>[17]</sup> - 1679:5, 1679:6, 1702:3, 1702:4, 1702:7, 1702:11, 1702:12, 1702:13, 1702:17, 1704:1, 1712:8, 1712:10, 1717:19, 1718:3, 1718:4, 1718:13</p>	<p><b>PELOQUIN</b> <sup>[1]</sup> - 1746:20</p> <p><b>PEOPLE</b> <sup>[4]</sup> - 1714:21, 1728:5, 1743:15, 1747:21</p> <p><b>PER</b> <sup>[6]</sup> - 1687:12, 1693:21, 1715:12, 1715:16, 1724:21, 1725:7</p> <p><b>PERCENT</b> <sup>[3]</sup> - 1717:25, 1718:20</p> <p><b>PERCHLORATE</b> <sup>[3]</sup> - 1732:9, 1732:16, 1733:21</p> <p><b>PERCHLORATE</b> <sup>[73]</sup> - 1682:1, 1682:15, 1682:19, 1682:22, 1682:25, 1683:6, 1683:7, 1683:10, 1683:12, 1683:20, 1683:23, 1684:15, 1688:20, 1688:24, 1690:25, 1691:2, 1691:5, 1691:11, 1691:12, 1691:13, 1694:11, 1700:14, 1700:19, 1700:23, 1701:3, 1701:10, 1701:14, 1701:18, 1701:22, 1709:12, 1709:14, 1709:21, 1710:7, 1710:24, 1711:18, 1711:21, 1712:4, 1712:5, 1712:8, 1712:9, 1712:17, 1717:17, 1717:25, 1718:1, 1718:2, 1718:4, 1718:20, 1719:1, 1719:10, 1719:14, 1723:17, 1723:19, 1723:21, 1724:2, 1724:19, 1725:1, 1725:5, 1725:12, 1725:15, 1731:3, 1731:18, 1732:4, 1732:10, 1732:21, 1733:22, 1736:2, 1736:25, 1737:23, 1738:3, 1738:19, 1739:22, 1740:14, 1740:25</p> <p><b>PERCHLORATE'S</b> <sup>[1]</sup> - 1719:5</p> <p><b>PERCIPIENT</b> <sup>[5]</sup> - 1731:13, 1731:16, 1748:5, 1748:21, 1749:7</p> <p><b>PERHAPS</b> <sup>[1]</sup> - 1686:2</p> <p><b>PERIMETER</b> <sup>[6]</sup> -</p>	<p>1732:13, 1738:18, 1741:23, 1742:2, 1742:6, 1742:8</p> <p><b>PERIOD</b> <sup>[6]</sup> - 1679:14, 1699:13, 1714:5, 1714:15, 1716:22, 1724:15</p> <p><b>PERMIT</b> <sup>[8]</sup> - 1741:25, 1742:4, 1742:5, 1742:7, 1742:9, 1742:11, 1742:14, 1742:18</p> <p><b>PERMITTING</b> <sup>[3]</sup> - 1741:17, 1741:21, 1743:3</p> <p><b>PERSIST</b> <sup>[1]</sup> - 1703:19</p> <p><b>PERSON</b> <sup>[1]</sup> - 1748:4</p> <p><b>PERSONAL</b> <sup>[1]</sup> - 1750:3</p> <p><b>PHENOMENON</b> <sup>[1]</sup> - 1694:7</p> <p><b>PHYSICIAN</b> <sup>[5]</sup> - 1748:10, 1748:11, 1748:13, 1748:21, 1748:23</p> <p><b>PHYSICIANS</b> <sup>[1]</sup> - 1748:25</p> <p><b>PHYSICS</b> <sup>[2]</sup> - 1716:5, 1720:9</p> <p><b>PICTURE</b> <sup>[1]</sup> - 1723:3</p> <p><b>PIPES</b> <sup>[1]</sup> - 1706:4</p> <p><b>PIPING</b> <sup>[3]</sup> - 1679:20, 1734:18, 1734:20</p> <p><b>PLACE</b> <sup>[3]</sup> - 1734:21, 1735:2, 1736:6</p> <p><b>PLAINTIFF</b> <sup>[5]</sup> - 1734:1, 1735:12, 1744:6, 1745:22, 1751:19</p> <p><b>PLAN</b> <sup>[1]</sup> - 1739:6</p> <p><b>PLANT</b> <sup>[1]</sup> - 1734:23</p> <p><b>PLAUSIBLE</b> <sup>[4]</sup> - 1681:3, 1683:2, 1708:25, 1712:1</p> <p><b>PLAY</b> <sup>[1]</sup> - 1746:19</p> <p><b>PLUME</b> <sup>[50]</sup> - 1682:1, 1682:9, 1682:13, 1688:20, 1688:21, 1688:22, 1690:3, 1690:25, 1691:2, 1691:8, 1691:11, 1691:12, 1691:14, 1691:18, 1695:7, 1695:22, 1701:2, 1707:21, 1708:4, 1710:10, 1715:17, 1715:22, 1717:15, 1717:19, 1717:21, 1718:19, 1718:20, 1720:25, 1721:7,</p>	<p>1723:17, 1723:18, 1723:19, 1723:21, 1723:25, 1724:6, 1724:19, 1725:1, 1725:5, 1725:12, 1725:13, 1725:15, 1727:16, 1732:18, 1733:9, 1737:23, 1738:5, 1739:22</p> <p><b>PLUME'S</b> <sup>[1]</sup> - 1710:1</p> <p><b>PLUMES</b> <sup>[12]</sup> - 1681:25, 1682:6, 1689:13, 1702:4, 1702:7, 1715:18, 1718:9, 1718:14, 1718:22, 1725:18, 1726:2</p> <p><b>POINT</b> <sup>[10]</sup> - 1721:23, 1730:17, 1732:2, 1732:15, 1733:18, 1733:20, 1733:22, 1743:9, 1749:23, 1751:5</p> <p><b>POINTS</b> <sup>[3]</sup> - 1682:11, 1701:9, 1720:3</p> <p><b>POLICY</b> <sup>[2]</sup> - 1742:20, 1742:24</p> <p><b>PORTION</b> <sup>[2]</sup> - 1700:15, 1704:16</p> <p><b>PORTIONS</b> <sup>[1]</sup> - 1701:6</p> <p><b>POSITION</b> <sup>[1]</sup> - 1729:19</p> <p><b>POSSIBILITY</b> <sup>[2]</sup> - 1725:4, 1725:9</p> <p><b>POSSIBLE</b> <sup>[3]</sup> - 1695:6, 1734:4, 1737:19</p> <p><b>POSSIBLY</b> <sup>[1]</sup> - 1714:5</p> <p><b>POTABLE</b> <sup>[1]</sup> - 1732:19</p> <p><b>POTENTIAL</b> <sup>[4]</sup> - 1690:2, 1709:7, 1744:22, 1747:18</p> <p><b>POTENTIALLY</b> <sup>[1]</sup> - 1746:2</p> <p><b>PRACTICE</b> <sup>[1]</sup> - 1714:1</p> <p><b>PRACTICES</b> <sup>[2]</sup> - 1714:24, 1714:25</p> <p><b>PRECISE</b> <sup>[4]</sup> - 1682:10, 1691:2, 1721:7, 1746:14</p> <p><b>PREPARE</b> <sup>[1]</sup> - 1686:17</p> <p><b>PREPARED</b> <sup>[8]</sup> - 1690:8, 1691:9, 1695:25, 1710:22, 1711:7, 1711:13,</p>
---	---	---	--	---

<p>1747:9, 1750:23  <b>PREPARING</b> [1] -  1686:18  <b>PRESENCE</b> [3] -  1678:4, 1743:20,  1743:23  <b>PRESENT</b> [2] - 1678:6  <b>PRESENTED</b> [1] -  1745:8  <b>PRESENTING</b> [1] -  1751:6  <b>PRETTY</b> [8] - 1697:7,  1697:12, 1704:7,  1706:21, 1718:9,  1718:24, 1724:3,  1736:23  <b>PREVENT</b> [3] -  1732:17, 1734:4,  1739:2  <b>PREVENTING</b> [1] -  1733:9  <b>PREVIOUSLY</b> [1] -  1678:14  <b>PREVIOUSLY</b> [2] -  1700:18, 1748:19  <b>PRIMARILY</b> [1] -  1720:17  <b>PRINCIPLE</b> [2] -  1704:7, 1720:21  <b>PROBLEM</b> [4] -  1691:13, 1691:15,  1714:12, 1739:1  <b>PROBLEMS</b> [1] -  1729:16  <b>PROCEEDINGS</b> [1] -  1752:4  <b>PROCESS</b> [8] -  1737:9, 1741:17,  1741:21, 1742:4,  1742:14, 1742:18,  1742:24, 1743:3  <b>PRODUCTION</b> [13] -  1691:6, 1693:23,  1694:5, 1694:13,  1694:14, 1698:1,  1698:3, 1699:6,  1701:7, 1708:2,  1710:5, 1717:4,  1731:25  <b>PROFESSION</b> [1] -  1729:24  <b>PROFESSIONAL</b> [1] -  1745:24  <b>PROGNOSIS</b> [1] -  1748:12  <b>PROGRAM</b> [1] -  1741:24  <b>PROJECT</b> [5] -  1734:17, 1734:18,  1734:19, 1735:4,</p>	<p>1735:20  <b>PROJECTIONS</b> [1] -  1740:18  <b>PROPERLY</b> [1] -  1714:21  <b>PROPERTY</b> [1] -  1728:4  <b>PROTECT</b> [3] -  1737:20, 1739:14,  1740:22  <b>PROVEN</b> [1] - 1734:15  <b>PROVIDE</b> [6] - 1692:3,  1693:2, 1732:18,  1737:24, 1738:8,  1740:7  <b>PROVIDED</b> [2] -  1678:24, 1738:23  <b>PROVIDES</b> [1] -  1739:21  <b>PULL</b> [4] - 1682:6,  1685:24, 1686:13,  1707:7  <b>PULLED</b> [1] - 1702:18  <b>PUMP</b> [5] - 1693:20,  1697:15, 1697:17,  1716:9, 1716:24  <b>PUMPING</b> [42] -  1692:7, 1692:10,  1693:16, 1694:1,  1694:2, 1694:5,  1694:8, 1694:12,  1696:6, 1696:11,  1696:17, 1696:18,  1697:1, 1697:17,  1698:1, 1698:2,  1698:10, 1698:16,  1698:17, 1698:22,  1699:9, 1716:8,  1716:24, 1717:3,  1717:4, 1723:20,  1723:22, 1724:1,  1724:7, 1724:12,  1724:21, 1724:23,  1724:24, 1725:7,  1725:14, 1737:5,  1737:19, 1739:13,  1739:20  <b>PURGING</b> [2] -  1714:3, 1714:12  <b>PURPLE</b> [7] -  1721:19, 1721:21,  1722:12, 1723:10,  1727:8, 1728:1  <b>PUSHING</b> [1] -  1744:24  <b>PUT</b> [6] - 1710:17,  1734:2, 1734:3,  1739:12, 1740:17,  1741:9  <b>PVC</b> [1] - 1679:20</p>	<p><b>Q</b></p> <p><b>Q-2</b> [2] - 1735:14,  1735:15  <b>QUADRANT</b> [1] -  1721:14  <b>QUALIFIES</b> [1] -  1701:8  <b>QUALIFYING</b> [1] -  1749:25  <b>QUALITY</b> [3] -  1681:16, 1693:10,  1725:20  <b>QUANTIFY</b> [1] -  1724:19  <b>QUANTITIES</b> [1] -  1679:18  <b>QUESTIONING</b> [1] -  1707:16  <b>QUESTIONS</b> [5] -  1714:9, 1716:19,  1719:8, 1737:5,  1749:5  <b>QUICKLY</b> [4] - 1685:9,  1734:4, 1735:16,  1742:8  <b>QUITE</b> [8] - 1696:25,  1698:21, 1700:17,  1700:20, 1702:9,  1711:17, 1723:13,  1749:20  <b>QUOTE</b> [2] - 1700:12,  1701:9</p>	<p><b>REAL</b> [1] - 1737:4  <b>REALIZE</b> [1] - 1722:24  <b>REALLY</b> [16] -  1678:22, 1687:18,  1691:13, 1707:19,  1723:3, 1723:5,  1725:3, 1725:4,  1725:10, 1725:16,  1725:17, 1739:10,  1739:12, 1742:4,  1743:6, 1746:24  <b>REASON</b> [8] - 1688:5,  1692:2, 1692:21,  1693:14, 1703:22,  1712:17, 1714:19,  1737:16  <b>REASONABLE</b> [2] -  1680:20, 1680:24  <b>REASONS</b> [1] -  1715:20  <b>REBUTTAL</b> [7] -  1696:14, 1745:21,  1750:1, 1750:5,  1750:7, 1750:14,  1751:6  <b>RECEIVE</b> [1] -  1740:11  <b>RECEIVED</b> [5] -  1694:19, 1731:20,  1733:18, 1736:2,  1739:9  <b>RECEIVING</b> [3] -  1731:17, 1737:1,  1737:15  <b>RECENT</b> [1] - 1704:2  <b>RECENTLY</b> [1] -  1735:18  <b>RECESS</b> [1] - 1752:3  <b>RECHARGES</b> [1] -  1697:10  <b>RECOMMENDING</b> [1]  - 1741:12  <b>RECORD</b> [5] - 1678:5,  1729:2, 1743:22,  1743:23, 1750:20  <b>RECORDS</b> [5] -  1678:19, 1678:20,  1678:24, 1679:2,  1679:4  <b>RECROSS</b> [2] -  1720:5, 1727:23  <b>RECROSS-</b>  <b>EXAMINATION</b> [2] -  1720:5, 1727:23  <b>RED</b> [3] - 1687:10,  1687:14, 1722:18  <b>REDIRECT</b> [2] -  1713:1, 1727:1  <b>REFER</b> [3] - 1710:16,  1739:16, 1742:21</p>	<p><b>REFERRED</b> [4] -  1703:4, 1713:8,  1716:8, 1749:14  <b>REFERRING</b> [12] -  1685:13, 1690:13,  1691:14, 1693:22,  1695:20, 1696:9,  1696:12, 1696:22,  1700:17, 1705:2,  1730:3, 1739:17  <b>REFINED</b> [1] - 1693:2  <b>REGARD</b> [1] - 1734:5  <b>REGARDING</b> [5] -  1685:19, 1693:3,  1713:13, 1731:18,  1738:10  <b>RELATED</b> [1] -  1736:12  <b>RELATES</b> [1] -  1741:17  <b>RELATION</b> [1] -  1719:15  <b>RELATIVE</b> [1] -  1726:2  <b>RELEASED</b> [2] -  1710:25, 1712:13  <b>RELEVANT</b> [3] -  1681:7, 1681:9,  1681:11  <b>RELIED</b> [1] - 1699:25  <b>REMAIN</b> [4] - 1678:5,  1678:8, 1743:22,  1743:23  <b>REMAINING</b> [2] -  1743:25, 1747:2  <b>REMEDY</b> [1] - 1732:3  <b>REMEMBER</b> [6] -  1684:23, 1684:25,  1686:18, 1690:23,  1741:23, 1743:14  <b>REMOVE</b> [2] -  1688:12, 1689:22  <b>RENDITION</b> [5] -  1682:10, 1723:17,  1724:25, 1725:13  <b>REPEAT</b> [3] - 1711:10,  1722:14, 1724:4  <b>REPEATABLE</b> [1] -  1737:4  <b>REPORT</b> [36] -  1688:16, 1689:1,  1689:3, 1689:5,  1689:6, 1689:9,  1690:20, 1690:21,  1694:17, 1694:21,  1695:6, 1695:25,  1696:14, 1696:21,  1697:22, 1698:25,  1699:2, 1700:1,  1701:20, 1703:3,</p>
		<p><b>R</b></p> <p><b>RAINFALL</b> [1] -  1724:12  <b>RAINS</b> [1] - 1704:9  <b>RAISE</b> [1] - 1728:20  <b>RAN</b> [2] - 1696:5,  1735:15  <b>RANGE</b> [1] - 1684:22  <b>RARE</b> [1] - 1707:14  <b>RARELY</b> [1] - 1706:14  <b>RATE</b> [3] - 1718:5,  1718:7, 1726:19  <b>RATES</b> [1] - 1717:24  <b>REACH</b> [1] - 1712:17  <b>REACHED</b> [5] -  1682:2, 1684:2,  1707:24, 1711:5,  1711:20  <b>READ</b> [4] - 1697:3,  1726:7, 1745:11,  1746:25  <b>READING</b> [2] -  1696:14, 1696:20  <b>READINGS</b> [1] -  1716:1</p>		

<p>1703:11, 1708:16, 1710:13, 1710:15, 1710:22, 1711:8, 1711:13, 1713:8, 1717:16, 1725:17, 1726:7, 1740:10, 1740:11, 1742:15, 1750:10</p> <p><b>REPORTING</b> [1] - 1688:25</p> <p><b>REPORTS</b> [2] - 1685:17, 1699:25</p> <p><b>REPRESENT</b> [1] - 1704:17</p> <p><b>REPRESENTATION</b> [4] - 1688:23, 1695:9, 1695:14, 1724:14</p> <p><b>REPRESENTATIVE</b> [3] - 1714:17, 1730:21</p> <p><b>REPRESENTATIVES</b> [1] - 1731:6</p> <p><b>REPRESENTING</b> [1] - 1695:22</p> <p><b>REPRESENTS</b> [3] - 1708:19, 1721:21, 1722:22</p> <p><b>REQUIRED</b> [3] - 1721:22, 1742:16, 1748:22</p> <p><b>REQUIREMENTS</b> [1] - 1742:25</p> <p><b>RESEARCH</b> [1] - 1718:12</p> <p><b>RESERVE</b> [1] - 1750:2</p> <p><b>RESIDUAL</b> [1] - 1703:18</p> <p><b>RESOURCES</b> [1] - 1731:8</p> <p><b>RESPECT</b> [2] - 1680:10, 1690:25</p> <p><b>RESPOND</b> [1] - 1701:7</p> <p><b>RESPONDING</b> [1] - 1737:2</p> <p><b>RESPONSE</b> [9] - 1697:14, 1697:18, 1716:18, 1717:6, 1717:13, 1717:14, 1733:24, 1739:8, 1749:9</p> <p><b>RESPONSES</b> [1] - 1724:12</p> <p><b>RESPONSIBLE</b> [1] - 1736:21</p> <p><b>REST</b> [2] - 1744:13, 1745:3</p> <p><b>RESTARTED</b> [3] - 1696:12, 1696:22, 1696:23</p>	<p><b>RESTING</b> [1] - 1744:23</p> <p><b>RESTORE</b> [1] - 1732:19</p> <p><b>RESULTS</b> [1] - 1739:11</p> <p><b>RESUMED</b> [1] - 1678:15</p> <p><b>RETAINED</b> [13] - 1745:15, 1745:16, 1745:19, 1747:15, 1747:22, 1749:12, 1749:13, 1749:15, 1749:16, 1750:2, 1750:5, 1750:9, 1750:17</p> <p><b>RETARDATION</b> [1] - 1718:13</p> <p><b>RETARDED</b> [1] - 1718:6</p> <p><b>RETURNING</b> [1] - 1746:4</p> <p><b>REVIEW</b> [6] - 1683:18, 1683:21, 1692:20, 1703:17, 1711:4, 1713:3</p> <p><b>REVIEWED</b> [5] - 1689:5, 1694:22, 1702:2, 1703:9, 1703:11</p> <p><b>RICHARD</b> [54] - 1678:12, 1678:16, 1679:11, 1679:12, 1685:7, 1685:8, 1686:4, 1686:7, 1686:13, 1686:17, 1688:12, 1688:13, 1688:14, 1688:15, 1689:21, 1689:23, 1689:24, 1690:1, 1693:1, 1694:16, 1694:20, 1694:21, 1699:20, 1699:24, 1705:3, 1705:4, 1706:12, 1708:15, 1708:17, 1712:22, 1716:15, 1719:12, 1720:3, 1720:6, 1721:10, 1721:13, 1726:6, 1726:22, 1727:21, 1727:24, 1728:10, 1730:15, 1741:2, 1744:9, 1744:12, 1745:24, 1746:11, 1747:15, 1748:1, 1748:6, 1748:20, 1751:7, 1751:15, 1751:20</p> <p><b>RICHARD</b> [13] - 1685:6, 1686:3,</p>	<p>1696:4, 1697:2, 1713:10, 1714:9, 1744:8, 1745:23, 1746:9, 1747:6, 1751:5, 1751:12, 1751:18</p> <p><b>RIO</b> [1] - 1734:23</p> <p><b>RISE</b> [1] - 1743:18</p> <p><b>RISING</b> [1] - 1751:22</p> <p><b>RL</b> [2] - 1688:24, 1688:25</p> <p><b>ROAD</b> [1] - 1736:1</p> <p><b>ROLES</b> [1] - 1731:10</p> <p><b>ROUTES</b> [1] - 1713:17</p> <p><b>ROUTINELY</b> [2] - 1736:21, 1736:22</p> <p><b>RULE</b> [1] - 1747:9</p> <p><b>RULES</b> [1] - 1750:10</p> <p><b>RULING</b> [2] - 1747:10, 1747:12</p> <p><b>RUN</b> [4] - 1696:17, 1697:9, 1699:5, 1699:8</p>	<p><b>S</b></p> <p><b>S-1</b> [4] - 1684:8, 1733:3, 1733:20, 1735:22</p> <p><b>S-2</b> [4] - 1684:9, 1733:3, 1733:20, 1735:22</p> <p><b>S-I-M-P-S-O-N</b> [1] - 1729:4</p> <p><b>SAMPLE</b> [4] - 1692:9, 1705:14, 1705:22, 1737:7</p> <p><b>SAMPLED</b> [3] - 1684:15, 1714:20, 1714:21</p> <p><b>SAMPLES</b> [1] - 1723:11</p> <p><b>SAMPLING</b> [4] - 1703:13, 1706:8, 1714:16, 1714:24</p> <p><b>SAUGUS</b> [64] - 1680:4, 1680:12, 1680:13, 1680:16, 1680:22, 1681:4, 1681:7, 1681:12, 1683:12, 1683:14, 1683:15, 1683:24, 1684:6, 1684:9, 1684:12, 1684:14, 1688:25, 1693:8, 1693:19, 1696:11, 1696:18, 1696:23, 1697:10, 1699:9, 1699:14, 1700:9, 1700:14, 1700:15,</p>	<p>1701:6, 1702:3, 1702:15, 1706:9, 1715:8, 1717:3, 1717:7, 1723:20, 1724:21, 1725:6, 1731:1, 1731:25, 1732:9, 1732:14, 1732:15, 1733:3, 1733:7, 1733:11, 1733:13, 1733:15, 1733:20, 1734:17, 1734:19, 1738:17, 1738:18</p> <p><b>SAW</b> [4] - 1681:11, 1691:19, 1701:17, 1717:15</p> <p><b>SCIENCE</b> [2] - 1712:7, 1729:20</p> <p><b>SCIENTIFIC</b> [2] - 1680:20, 1680:24</p> <p><b>SCIENTIST</b> [1] - 1723:24</p> <p><b>SCIENTISTS</b> [1] - 1737:4</p> <p><b>SCOPE</b> [4] - 1721:7, 1724:1, 1724:5, 1748:14</p> <p><b>SCREENED</b> [1] - 1694:4</p> <p><b>SCREENING</b> [1] - 1705:21</p> <p><b>SCRIBBLES</b> [1] - 1688:12</p> <p><b>SCV</b> [1] - 1731:18</p> <p><b>SEAN</b> [1] - 1729:4</p> <p><b>SEAT</b> [1] - 1743:6</p> <p><b>SEATED</b> [2] - 1728:25, 1743:22</p> <p><b>SECOND</b> [4] - 1684:12, 1693:24, 1699:20, 1702:6</p> <p><b>SEE</b> [42] - 1678:19, 1681:9, 1682:8, 1687:2, 1687:4, 1687:24, 1689:23, 1690:1, 1690:16, 1691:16, 1695:1, 1695:9, 1698:21, 1700:5, 1702:16, 1704:14, 1704:16, 1708:7, 1709:12, 1718:16, 1718:18, 1718:19, 1721:19, 1721:20, 1722:7, 1722:9, 1722:10, 1722:17, 1724:9, 1727:6, 1727:16, 1728:1, 1739:11, 1740:1, 1740:22, 1741:13, 1743:17,</p>	<p>1745:12, 1748:15, 1751:17, 1751:22</p> <p><b>SEEING</b> [1] - 1740:3</p> <p><b>SENSE</b> [1] - 1736:15</p> <p><b>SENTENCE</b> [7] - 1700:7, 1701:5, 1701:8, 1701:9, 1702:6, 1749:24, 1749:25</p> <p><b>SENTENCING</b> [1] - 1750:25</p> <p><b>SENTRY</b> [1] - 1715:8</p> <p><b>SEPARATE</b> [4] - 1706:4, 1706:5, 1706:7</p> <p><b>SEPARATION</b> [1] - 1717:12</p> <p><b>SERVE</b> [1] - 1730:19</p> <p><b>SERVED</b> [1] - 1731:13</p> <p><b>SERVING</b> [1] - 1731:10</p> <p><b>SET</b> [1] - 1719:8</p> <p><b>SETTLEMENT</b> [5] - 1730:11, 1730:12, 1730:13, 1730:18, 1730:22</p> <p><b>SHALL</b> [2] - 1728:21, 1728:22</p> <p><b>SHARED</b> [2] - 1738:9, 1738:12</p> <p><b>SHORT</b> [3] - 1716:22, 1735:16, 1748:20</p> <p><b>SHOW</b> [16] - 1681:17, 1681:19, 1682:1, 1682:13, 1682:14, 1686:2, 1688:15, 1688:20, 1694:15, 1694:25, 1697:4, 1700:23, 1708:22, 1723:5, 1739:12</p> <p><b>SHOWED</b> [8] - 1683:18, 1684:8, 1685:1, 1686:10, 1711:8, 1711:14, 1711:17, 1711:18</p> <p><b>SHOWING</b> [1] - 1724:25</p> <p><b>SHOWN</b> [9] - 1682:7, 1685:9, 1685:14, 1685:18, 1703:8, 1707:9, 1710:6, 1712:4, 1727:25</p> <p><b>SHOWS</b> [3] - 1681:22, 1695:17</p> <p><b>SHUT</b> [2] - 1699:14, 1732:18</p> <p><b>SIC</b> [14] - 1679:16, 1679:20, 1680:1, 1680:7, 1680:11, 1680:16, 1680:22,</p>
---	--	---	---	--	--

1680:23, 1681:4, 1681:10, 1681:12, 1681:17, 1681:20, 1696:4 <b>SIDE</b> [3] - 1686:11, 1687:8, 1749:13 <b>SIDES</b> [2] - 1746:18, 1747:4 <b>SIGNIFICANCE</b> [1] - 1715:2 <b>SIGNIFICANT</b> [1] - 1715:4 <b>SIGNIFY</b> [1] - 1748:4 <b>SIMILAR</b> [2] - 1717:21, 1719:5 <b>SIMILARITIES</b> [3] - 1700:13, 1700:18, 1734:13 <b>SIMMONS</b> [1] - 1744:19 <b>SIMPLER</b> [1] - 1735:4 <b>SIMPLY</b> [1] - 1748:4 <b>SIMPSON</b> [5] - 1728:16, 1729:4, 1729:11, 1744:3, 1744:19 <b>SIMPSON</b> [1] - 1729:7 <b>SINGLE</b> [3] - 1722:25, 1723:1, 1734:21 <b>SIT</b> [2] - 1691:1, 1732:20 <b>SITE</b> [75] - 1678:18, 1679:6, 1679:16, 1679:20, 1680:1, 1680:12, 1680:16, 1681:4, 1681:11, 1681:12, 1681:17, 1681:20, 1682:2, 1682:20, 1683:4, 1683:8, 1683:16, 1683:20, 1686:9, 1686:11, 1687:3, 1687:8, 1687:9, 1687:17, 1687:25, 1688:6, 1689:18, 1691:3, 1691:5, 1691:24, 1691:25, 1692:17, 1696:4, 1701:4, 1701:17, 1702:12, 1702:15, 1703:1, 1703:20, 1704:12, 1704:17, 1709:8, 1709:15, 1709:19, 1710:24, 1711:9, 1711:15, 1711:23, 1712:2, 1712:13, 1713:23, 1713:24, 1715:15, 1716:1, 1717:20, 1717:21, 1721:23,	1722:5, 1722:6, 1722:11, 1730:3, 1730:6, 1730:20, 1731:3, 1732:24, 1733:4, 1733:7, 1733:12, 1733:14, 1733:16, 1735:22, 1735:23, 1738:18, 1742:6 <b>SITES</b> [2] - 1679:4, 1734:16 <b>SITTING</b> [1] - 1714:14 <b>SIX</b> [1] - 1722:7 <b>SIZE</b> [2] - 1701:2, 1726:2 <b>SKILL</b> [1] - 1750:4 <b>SLADE</b> [4] - 1696:4, 1696:5, 1697:2, 1716:8 <b>SLIPPED</b> [1] - 1751:20 <b>SLOWER</b> [6] - 1712:8, 1712:9, 1718:1, 1718:17, 1718:18, 1719:6 <b>SLOWEST</b> [1] - 1718:3 <b>SLOWLY</b> [2] - 1704:10, 1717:8 <b>SMITH</b> [4] - 1702:18, 1703:8, 1703:10, 1703:17 <b>SOIL</b> [15] - 1701:17, 1702:19, 1702:25, 1703:12, 1704:1, 1704:2, 1704:4, 1704:8, 1708:6, 1710:3, 1718:6, 1719:1, 1719:3 <b>SOLEMNLY</b> [1] - 1728:21 <b>SOLID</b> [1] - 1746:23 <b>SOLVE</b> [1] - 1714:12 <b>SOLVENT</b> [2] - 1678:21 <b>SOMEONE</b> [5] - 1690:4, 1692:9, 1747:16, 1748:17, 1748:23 <b>SOMETIMES</b> [1] - 1726:11 <b>SOMEWHERE</b> [2] - 1687:21, 1720:1 <b>SOON</b> [1] - 1737:19 <b>SORRY</b> [11] - 1683:5, 1684:23, 1702:20, 1709:18, 1718:3, 1722:14, 1724:4, 1732:12, 1733:5, 1734:2, 1743:1 <b>SORT</b> [3] - 1717:12,	1718:15, 1738:14 <b>SORTS</b> [1] - 1749:5 <b>SOURCE</b> [20] - 1680:7, 1680:25, 1681:5, 1688:2, 1700:9, 1701:6, 1701:21, 1702:3, 1703:6, 1703:11, 1708:2, 1709:4, 1709:6, 1709:8, 1710:25, 1711:21, 1713:13, 1727:18, 1742:16, 1742:19 <b>SOURCES</b> [3] - 1709:19, 1709:20, 1720:21 <b>SOUTH</b> [1] - 1715:9 <b>SOUTHERNMOST</b> [1] - 1707:2 <b>SOUTHWEST</b> [3] - 1688:10, 1708:22, 1708:23 <b>SPEAKING</b> [2] - 1718:16, 1727:18 <b>SPEAKS</b> [1] - 1724:16 <b>SPECIFICALLY</b> [5] - 1690:13, 1690:23, 1714:22, 1736:12, 1745:18 <b>SPECIFICS</b> [1] - 1723:14 <b>SPEED</b> [4] - 1717:25, 1718:9, 1719:1, 1726:8 <b>SPELL</b> [1] - 1729:3 <b>SPOKANE</b> [1] - 1729:21 <b>SPREAD</b> [3] - 1723:18, 1739:22 <b>SPTF</b> [4] - 1734:12, 1735:5, 1737:22, 1739:6 <b>STAND</b> [2] - 1728:18, 1744:1 <b>STANDARD</b> [4] - 1680:24, 1714:1, 1714:23, 1714:25 <b>STANDING</b> [1] - 1714:5 <b>STANIN</b> [1] - 1711:5 <b>START</b> [2] - 1706:22, 1717:7 <b>STARTED</b> [3] - 1736:1, 1742:3, 1742:4 <b>STATE</b> [1] - 1731:8 <b>STATE</b> [1] - 1729:3 <b>STATEMENT</b> [2] - 1712:21, 1723:22 <b>STATIC</b> [1] - 1737:6	<b>STATUS</b> [2] - 1685:20, 1741:17 <b>STEP</b> [5] - 1728:12, 1732:2, 1737:9, 1742:13, 1743:21 <b>STEPPING</b> [1] - 1741:15 <b>STICK</b> [2] - 1693:24, 1718:5 <b>STILL</b> [2] - 1691:7, 1746:23 <b>STIPULATED</b> [2] - 1694:17, 1704:13 <b>STOP</b> [1] - 1728:4 <b>STOPPING</b> [1] - 1743:9 <b>STRATEGY</b> [3] - 1738:17, 1739:2, 1740:22 <b>STRIKE</b> [1] - 1733:19 <b>STUDIES</b> [1] - 1718:15 <b>STUDY</b> [1] - 1739:1 <b>SUBJECT</b> [3] - 1709:21, 1709:22, 1743:15 <b>SUBPOENA</b> [1] - 1744:16 <b>SUBSTANCES</b> [1] - 1731:8 <b>SUCCESS</b> [1] - 1732:8 <b>SUFFICIENT</b> [3] - 1710:20, 1721:6, 1739:2 <b>SUGGEST</b> [4] - 1680:7, 1683:1, 1700:8, 1720:9 <b>SUGGESTED</b> [1] - 1708:1 <b>SUMMARY</b> [1] - 1699:18 <b>SUMMARY</b> [1] - 1699:21 <b>SUPPLY</b> [3] - 1732:19, 1737:24 <b>SURFACE</b> [2] - 1709:1, 1729:15 <b>SURROUNDING</b> [1] - 1714:7 <b>SUSTAINED</b> [6] - 1692:25, 1716:17, 1719:13, 1726:5, 1730:17, 1741:4 <b>SVE</b> [1] - 1685:20 <b>SWEAR</b> [2] - 1728:19, 1728:21 <b>SWORN</b> [2] - 1678:14, 1729:8 <b>SWORN</b> [1] - 1728:20 <b>SYSTEM</b> [7] - 1702:19, 1702:21,	1732:13, 1732:14, 1734:9, 1734:10, 1734:12 <b>T</b> <b>TABLE</b> [4] - 1704:5, 1704:10, 1717:8, 1743:6 <b>TCE</b> [66] - 1678:20, 1680:25, 1681:11, 1681:17, 1690:3, 1690:19, 1691:11, 1691:14, 1691:18, 1691:19, 1691:20, 1691:23, 1700:9, 1700:13, 1700:19, 1700:23, 1701:1, 1701:3, 1701:14, 1702:4, 1702:7, 1702:10, 1702:11, 1702:12, 1702:14, 1702:16, 1702:18, 1703:25, 1704:8, 1704:10, 1706:13, 1706:18, 1707:12, 1707:13, 1707:21, 1707:22, 1708:4, 1708:6, 1708:8, 1708:11, 1708:12, 1709:8, 1711:18, 1712:8, 1712:9, 1712:10, 1712:13, 1717:22, 1717:24, 1718:3, 1718:13, 1718:15, 1718:19, 1719:6, 1719:22, 1720:25, 1721:7, 1721:16, 1722:18, 1722:22, 1723:7, 1723:21, 1724:9, 1724:10, 1725:22 <b>TECHNICAL</b> [11] - 1730:25, 1732:7, 1736:15, 1737:11, 1738:1, 1738:21, 1740:21, 1741:12, 1742:15, 1745:25, 1747:22 <b>TEN</b> [4] - 1716:12, 1716:14, 1716:25, 1727:11 <b>TEND</b> [1] - 1692:6 <b>TENDS</b> [1] - 1688:10 <b>TERM</b> [2] - 1708:24, 1709:2 <b>TERMS</b> [6] - 1718:25, 1732:23, 1735:5, 1735:11, 1735:17, 1747:22
---	---	--	---	--

<b>TEST</b> [4] - 1697:17, 1716:8, 1716:24, 1735:10 <b>TESTED</b> [1] - 1714:2 <b>TESTIFIED</b> [2] - 1678:14, 1729:8 <b>TESTIFIED</b> [3] - 1683:7, 1701:13, 1710:17 <b>TESTIFY</b> [2] - 1702:20, 1746:15 <b>TESTIFYING</b> [1] - 1680:19 <b>TESTIMONY</b> [16] - 1685:11, 1685:25, 1689:15, 1693:7, 1700:19, 1707:10, 1709:11, 1710:15, 1728:21, 1745:25, 1746:2, 1746:3, 1747:18, 1747:19, 1748:24, 1750:5 <b>TESTING</b> [2] - 1684:5, 1714:2 <b>TESTS</b> [7] - 1696:6, 1696:11, 1696:17, 1696:18, 1697:1, 1697:4 <b>THE</b> [82] - 1678:5, 1678:9, 1678:10, 1679:10, 1683:22, 1683:25, 1684:1, 1684:4, 1684:7, 1684:10, 1684:11, 1684:14, 1684:18, 1684:20, 1684:24, 1685:3, 1685:5, 1686:2, 1692:25, 1699:23, 1705:1, 1705:19, 1705:24, 1705:25, 1706:3, 1706:10, 1712:24, 1716:16, 1716:17, 1719:13, 1720:4, 1726:5, 1727:22, 1728:11, 1728:13, 1728:14, 1728:17, 1728:24, 1728:25, 1729:1, 1729:2, 1729:4, 1729:5, 1730:17, 1739:15, 1739:18, 1741:4, 1743:8, 1743:11, 1743:18, 1743:21, 1744:5, 1744:7, 1744:11, 1744:13, 1744:18, 1744:24, 1745:1, 1745:4, 1745:6, 1745:12, 1745:16, 1745:20,	1745:23, 1746:4, 1746:13, 1746:21, 1747:1, 1747:5, 1747:25, 1748:2, 1748:7, 1749:8, 1749:19, 1750:6, 1750:12, 1750:18, 1751:11, 1751:16, 1751:22, 1751:25, 1752:3 <b>THEREABOUTS</b> [1] - 1751:1 <b>THEY'VE</b> [1] - 1690:18 <b>THOUSANDS</b> [1] - 1722:7 <b>THREE</b> [13] - 1685:4, 1690:18, 1704:17, 1705:4, 1705:5, 1705:9, 1705:20, 1706:1, 1706:7, 1706:25, 1718:17, 1722:6, 1746:22 <b>THROUGHOUT</b> [2] - 1689:6, 1701:16 <b>THURSDAY</b> [1] - 1751:24 <b>TIM</b> [2] - 1728:16, 1744:19 <b>TIMED</b> [1] - 1746:17 <b>TIMING</b> [1] - 1684:2 <b>TIMOTHY</b> [1] - 1729:4 <b>TIMOTHY</b> [1] - 1729:7 <b>TINY</b> [2] - 1692:5, 1692:6 <b>TODAY</b> [4] - 1683:11, 1686:1, 1721:3, 1732:20 <b>TODD</b> [2] - 1738:13, 1740:6 <b>TOGETHER</b> [4] - 1731:1, 1731:4, 1738:23, 1738:25 <b>TOMORROW</b> [10] - 1743:12, 1743:17, 1744:17, 1744:23, 1750:24, 1750:25, 1751:10, 1751:14, 1751:17, 1752:1 <b>TOOK</b> [2] - 1734:18, 1736:6 <b>TOPIC</b> [2] - 1736:8, 1741:22 <b>TOWARDS</b> [1] - 1681:12 <b>TOXIC</b> [1] - 1731:7 <b>TRACER</b> [3] - 1682:23, 1712:5, 1718:15 <b>TRACERS</b> [3] - 1679:14, 1680:16,	1680:21 <b>TRAINING</b> [1] - 1750:4 <b>TRANSPORT</b> [1] - 1712:7 <b>TRANSPORTED</b> [1] - 1683:3 <b>TRAVEL</b> [6] - 1711:22, 1712:2, 1717:23, 1726:8, 1726:19, 1728:7 <b>TRAVELED</b> [4] - 1712:9, 1724:20, 1725:6, 1725:13 <b>TRAVELS</b> [2] - 1712:19, 1717:24 <b>TREATED</b> [1] - 1734:22 <b>TREATING</b> [4] - 1748:10, 1748:13, 1748:23 <b>TREATMENT</b> [28] - 1731:2, 1732:14, 1734:4, 1734:8, 1734:10, 1734:12, 1734:20, 1734:23, 1735:1, 1735:2, 1735:8, 1735:11, 1735:14, 1735:17, 1735:18, 1735:19, 1738:5, 1739:13, 1739:16, 1739:19, 1740:14, 1740:15, 1740:17, 1740:18, 1741:1, 1741:7, 1741:9, 1741:10 <b>TREATMENT</b> [3] - 1732:9, 1732:16, 1733:21 <b>TREMENDOUS</b> [1] - 1718:12 <b>TRIAL</b> [1] - 1678:5 <b>TRUDELL'S</b> [1] - 1696:14 <b>TRUE</b> [9] - 1683:10, 1683:11, 1690:11, 1694:6, 1701:23, 1703:22, 1728:6, 1745:20 <b>TRUTH</b> [3] - 1728:22, 1728:23 <b>TRY</b> [3] - 1699:5, 1738:7, 1739:1 <b>TRYING</b> [5] - 1681:8, 1718:12, 1737:3, 1740:22, 1746:5 <b>TUESDAY</b> [1] - 1678:1 <b>TURN</b> [1] - 1747:12 <b>TURNING</b> [1] - 1679:16 <b>TWO</b> [21] - 1680:21,	1684:16, 1684:21, 1689:24, 1690:15, 1697:5, 1697:8, 1698:25, 1704:21, 1705:6, 1705:9, 1706:3, 1709:21, 1716:20, 1716:23, 1718:9, 1718:10, 1718:16, 1722:6, 1731:10, 1746:7 <b>TWO-AND-A-HALF</b> [1] - 1746:7 <b>TYPE</b> [2] - 1730:19, 1734:8 <b>TYPES</b> [1] - 1679:2 <b>TYPICALLY</b> [1] - 1749:2	1697:5, 1698:16, 1698:24, 1699:13, 1716:24, 1732:21, 1733:22, 1734:4, 1734:18, 1735:8, 1735:22, 1738:18, 1739:20, 1741:16, 1742:3, 1742:7 <b>V-205</b> [7] - 1682:15, 1682:25, 1683:24, 1688:21, 1731:18, 1738:2, 1741:7 <b>VALUE</b> [1] - 1737:20 <b>VAPOR</b> [3] - 1701:18, 1702:19, 1702:20 <b>VARIATIONS</b> [1] - 1710:2 <b>VARIES</b> [1] - 1726:15 <b>VARYING</b> [2] - 1709:22, 1720:22 <b>VELOCITY</b> [1] - 1726:14 <b>VERSUS</b> [2] - 1724:7, 1734:25 <b>VERTICAL</b> [2] - 1705:14, 1706:8 <b>VESSELS</b> [3] - 1735:2, 1735:18, 1739:20 <b>VICINITY</b> [1] - 1694:2 <b>VIDEO</b> [4] - 1744:14, 1745:8, 1745:9, 1745:10 <b>VINYL</b> [5] - 1679:19, 1680:10, 1681:7, 1681:15, 1681:18 <b>VIOLATE</b> [1] - 1716:5 <b>VISTA</b> [1] - 1734:23 <b>VISUAL</b> [1] - 1706:1 <b>VOC</b> [8] - 1695:21, 1695:22, 1701:10, 1702:14, 1703:19, 1717:19, 1723:18, 1725:13 <b>VOCS</b> [16] - 1690:3, 1693:12, 1695:7, 1695:25, 1701:5, 1701:18, 1701:23, 1704:4, 1710:24, 1711:21, 1713:14, 1715:3, 1719:2, 1719:18, 1719:19, 1720:22 <b>VOLUMES</b> [1] - 1702:18
<b>U</b>				
<b>ULTIMATELY</b> [1] - 1748:2 <b>UNCERTAIN</b> [1] - 1710:18 <b>UNDER</b> [6] - 1678:8, 1699:20, 1728:3, 1737:6, 1744:16, 1747:16 <b>UNDERSTOOD</b> [4] - 1679:19, 1690:5, 1706:10, 1710:4 <b>UNIFORM</b> [1] - 1710:1 <b>UNIT</b> [1] - 1697:15 <b>UNITS</b> [1] - 1697:5 <b>UNIVERSITY</b> [2] - 1729:21, 1729:23 <b>UNLESS</b> [2] - 1681:22, 1751:16 <b>UNNECESSARILY</b> [1] - 1741:6 <b>UP</b> [21] - 1681:22, 1682:6, 1684:8, 1685:1, 1685:24, 1686:13, 1687:23, 1691:20, 1706:6, 1707:7, 1709:23, 1715:10, 1716:4, 1720:17, 1730:11, 1731:23, 1735:3, 1735:16, 1737:17, 1737:18, 1740:6 <b>UPGRADIENT</b> [2] - 1693:10, 1737:18 <b>UPPER</b> [1] - 1721:14				
<b>V</b>				
<b>V-201</b> [21] - 1682:15, 1682:25, 1683:24, 1688:20, 1697:2,				
<b>W</b>				
<b>WAIT</b> [2] - 1740:1, 1741:13				



<b>WAIT-AND-SEE</b> [2] - 1740:1, 1741:13 <b>WAITING</b> [4] - 1739:11, 1740:3, 1740:4, 1740:9 <b>WAS</b> [1] - 1729:8 <b>WASHINGTON</b> [1] - 1729:21 <b>WATCH</b> [1] - 1728:12 <b>WATER</b> [4] - 1730:9, 1731:8, 1731:9, 1731:18 <b>WATER</b> [36] - 1681:14, 1681:16, 1693:10, 1693:19, 1696:1, 1698:13, 1704:9, 1704:10, 1714:4, 1714:6, 1714:7, 1714:8, 1714:14, 1714:16, 1717:7, 1717:8, 1719:6, 1719:7, 1725:20, 1729:15, 1731:6, 1732:19, 1734:2, 1734:21, 1734:22, 1737:12, 1737:15, 1737:24, 1738:10, 1738:11, 1742:16, 1742:19, 1743:7 <b>WEEKS</b> [3] - 1716:21, 1716:23, 1717:10 <b>WELLHEAD</b> [18] - 1734:4, 1734:10, 1734:20, 1735:1, 1735:2, 1735:8, 1735:11, 1735:14, 1735:17, 1735:19, 1738:5, 1739:12, 1739:16, 1739:19, 1740:15, 1740:17, 1741:9, 1741:10 <b>WELLS</b> [146] - 1680:4, 1680:8, 1680:13, 1680:16, 1680:25, 1681:7, 1681:17, 1681:21, 1682:2, 1682:16, 1682:19, 1683:1, 1683:4, 1683:9, 1683:11, 1683:13, 1683:23, 1684:16, 1684:21, 1690:7, 1690:18, 1690:24, 1691:3, 1691:6, 1691:20, 1691:21, 1691:24, 1692:2, 1692:7, 1692:12, 1692:16, 1692:18, 1692:22, 1693:2, 1693:6, 1693:16, 1693:17, 1693:19, 1693:20, 1693:23, 1694:1, 1694:2, 1694:8, 1694:12, 1694:13, 1694:14, 1695:4, 1695:5, 1696:1, 1696:19, 1697:8, 1697:18, 1698:1, 1698:13, 1698:16, 1699:7, 1699:9, 1699:14, 1700:23, 1700:24, 1701:3, 1701:13, 1701:16, 1704:11, 1704:17, 1704:21, 1705:2, 1705:5, 1705:8, 1705:9, 1705:10, 1705:12, 1705:17, 1705:20, 1705:21, 1705:22, 1706:1, 1706:5, 1706:7, 1706:14, 1706:17, 1706:20, 1706:25, 1707:14, 1708:3, 1710:5, 1710:6, 1711:17, 1711:18, 1712:3, 1712:18, 1712:20, 1713:14, 1713:17, 1713:20, 1714:10, 1714:20, 1714:24, 1715:3, 1715:7, 1715:8, 1715:9, 1715:15, 1716:9, 1720:24, 1721:5, 1721:22, 1722:1, 1722:4, 1722:5, 1722:9, 1723:20, 1724:1, 1724:7, 1724:20, 1725:2, 1725:7, 1725:14, 1731:25, 1732:17, 1732:25, 1733:10, 1733:11, 1735:12, 1735:18, 1736:10, 1736:22, 1738:18, 1741:24 <b>WEST</b> [5] - 1681:12, 1681:17, 1688:10, 1708:23, 1722:7 <b>WESTERN</b> [6] - 1687:2, 1688:6, 1704:16, 1715:7, 1721:18, 1723:7 <b>WHITE</b> [2] - 1687:4, 1727:14 <b>WHITTAKER</b> [56] - 1678:17, 1678:19, 1678:24, 1679:6, 1682:2, 1682:18, 1682:20, 1683:4, 1683:16, 1683:19, 1685:10, 1685:19, 1686:9, 1686:13, 1687:17, 1687:25, 1691:3, 1691:25, 1692:17, 1692:22, 1700:8, 1700:24, 1701:11, 1702:3, 1702:5, 1702:8, 1702:15, 1702:25, 1703:20, 1704:12, 1704:16, 1709:8, 1710:24, 1711:9, 1711:15, 1711:23, 1712:2, 1712:13, 1712:19, 1716:1, 1721:4, 1721:7, 1721:22, 1722:5, 1722:6, 1722:10, 1728:16, 1730:3, 1730:9, 1730:20, 1731:2, 1735:13, 1736:2, 1736:5, 1741:6, 1743:5 <b>WHITTAKER'S</b> [3] - 1682:14, 1726:1, 1730:21 <b>WHITTAKER-</b> <b>BERMITE</b> [10] - 1683:16, 1692:17, 1700:8, 1701:11, 1702:3, 1702:5, 1702:8, 1702:25, 1709:8, 1730:3 <b>WHOLE</b> [1] - 1734:11 <b>WHOLE</b> [3] - 1728:23, 1729:16, 1734:20 <b>WIDE</b> [1] - 1711:8 <b>WIDENING</b> [1] - 1709:22 <b>WIDER</b> [1] - 1715:22 <b>WIDESPREAD</b> [3] - 1711:8, 1711:14, 1711:16 <b>WISH</b> [1] - 1749:22 <b>WITNESS</b> [11] - 1678:7, 1728:15, 1731:13, 1743:25, 1744:1, 1744:16, 1745:9, 1748:5, 1749:7, 1750:13, 1751:8 <b>WITNESS</b> [18] - 1678:9, 1678:14, 1683:25, 1684:4, 1684:10, 1684:14, 1684:20, 1685:3, 1699:23, 1705:24, 1706:3, 1716:16, 1728:13, 1728:24, 1729:1, 1729:4, 1729:8, 1739:18 <b>WITNESSES</b> [7] - 1744:22, 1745:7, 1745:25, 1746:1, 1747:2, 1747:18, 1748:21 <b>WORD</b> [3] - 1681:2, 1710:10, 1711:16 <b>WORDS</b> [2] - 1706:9, 1709:13 <b>WORRIED</b> [1] - 1714:4 <b>WORTH</b> [1] - 1749:19 <b>WRITTEN</b> [2] - 1731:22, 1736:4 <b>WROTE</b> [1] - 1746:11	<b>Y</b>	<b>YEAR</b> [1] - 1723:2 <b>YEARLY</b> [1] - 1740:18 <b>YEARS</b> [12] - 1683:19, 1684:20, 1685:4, 1699:14, 1708:8, 1714:23, 1716:25, 1719:16, 1729:24, 1730:7, 1730:13, 1730:23 <b>YELLOW</b> [5] - 1688:21, 1688:22, 1722:11, 1722:17, 1727:10 <b>YOURSELF</b> [1] - 1741:12
	<b>Z</b>	<b>ZONE</b> [5] - 1698:2, 1698:11, 1698:15, 1698:23, 1699:12 <b>ZONES</b> [3] - 1697:23, 1697:25, 1699:6